

THE ARCHITECT & BUILDING NEWS

24 NOVEMBER 1955

VOL 208

NO. 21

ONE SHILLING WEEKLY

Building

Exhibition



Review

Magnificent Lumley Castle, Durham Seat of the Lumley family since the thirteenth century was recently completely redecorated; British Paints were granted the exclusive privilege of supplying all materials.



Where TRADITION *means so much*

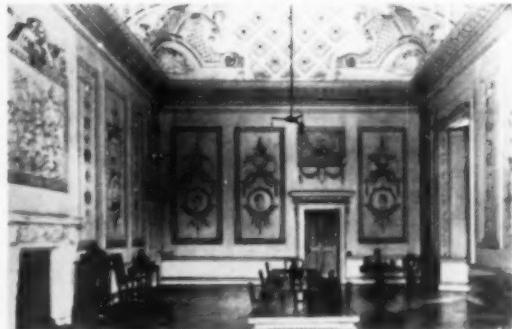
Interior aspects of this historic building show how the discreet but effective use of modern materials can provide adequate protection and still be in harmony with the essentially dignified character of the famous interiors, designed by Sir John Vanbrugh in 1721.

Wherever there is need for decorative materials of the highest quality and finish, the experienced advice of British Paints Limited is gladly at your disposal.

BRITISH PAINTS LIMITED

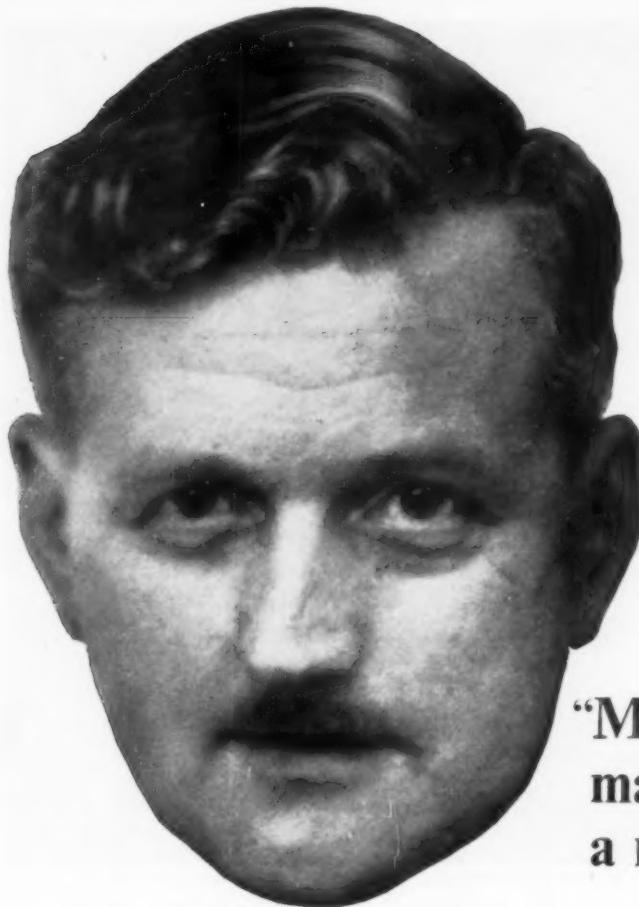
Portland Road, Newcastle upon Tyne, 2.
Telephone : 25151.

Crewe House, Curzon St., London, W.1.
Telephone : Grosvenor 6401-5.



The Garter Room (above) and The Vanbrugh Corridor.

Decorated throughout with British Paints Limited materials by W. Curry Limited, Chester-le-Street, County Durham.
The exterior photograph is by Aero Pictorial Limited.



"My husband is married to a metal window"

Says Mrs. Scott ruefully. "Twenty-five years," adds Mr. Scott with a twinkle in his eye, "and it doesn't seem a day too much." He has worked his way up the industry from drawing office in his youth to chief draughtsman and hence to production and sales. Now his South London area keeps him and his service team of representatives, draughtsmen, estimators and window fixers more than busy. But somehow he still finds time to do a spot of gardening and take a keen interest in the Scout movement. Amazing.

*MR. A. M. SCOTT, WILLIAMS & WILLIAMS LIMITED
81A High Street, Bromley, Kent · Ravensbourne 6274

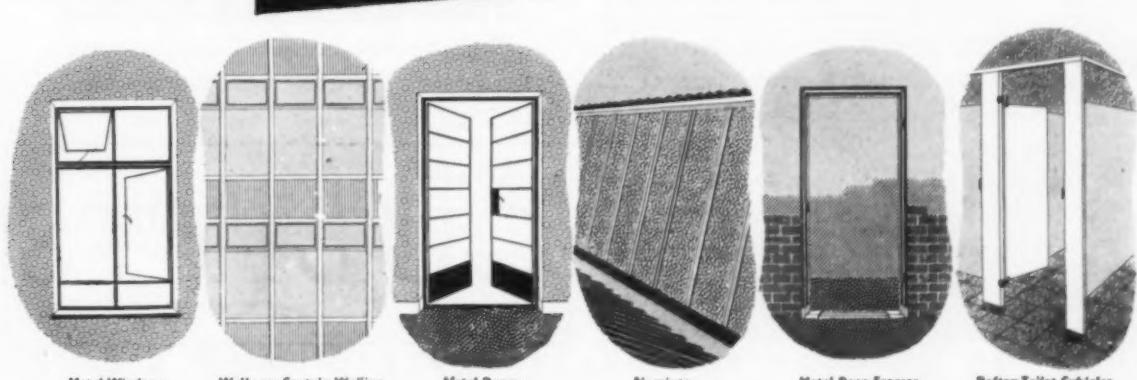
*Other offices at: Belfast (23762). Birmingham (Shirley 3064).
Bristol (38907). Cardiff (27092). Crawley (2200).
Glasgow (Douglas 0003). Hertford (3969). Leeds (21208).
Liverpool (Central 0325). London (Sloane 0323). Maidstone (51750).
Manchester (Blackfriars 9591). Newcastle-upon-Tyne (21353).
Norwich (24393). Nottingham (52131).
Reading (50291). Sheffield (51594). Southampton (26252).*

METAL WINDOWS

WILLIAMS & WILLIAMS



Member of the Metal Window Association



Metal Windows

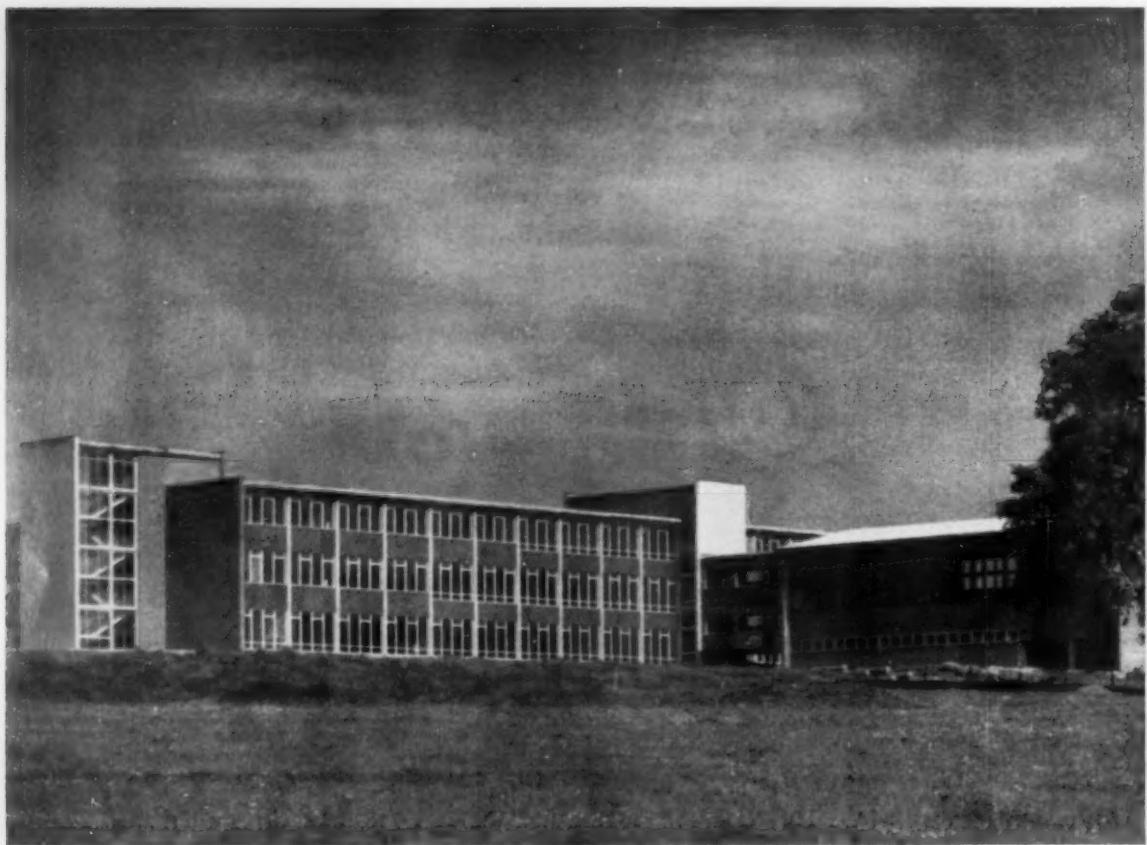
Wallpan Curtain Walling

Metal Doors

Alumines

Metal Door Frames

Rofan Toilet Cubicles



Architect: C. G. Stillman, Esq., F.R.I.B.A. Chief Architect to the Middlesex County Council.

Joel Street School Northwood Hills.

This modern school was recently completed for the Middlesex County Council and provides facilities for some 600 pupils. The main structure has a reinforced concrete frame, brick flank walls in multi-coloured facings, and curtain wallings of plastic sheeting retained by aluminium angles. Portland Stone wing walls run to the full height of the building at main staircases. Interior fitments in oak and teak were made by our Joinery Department.

The pitched reinforced concrete roof of the gymnasium has a 40-foot clear span. Science and physics laboratories provide students with individual work-bench space fitted with power, light, gas and water, all under master control.

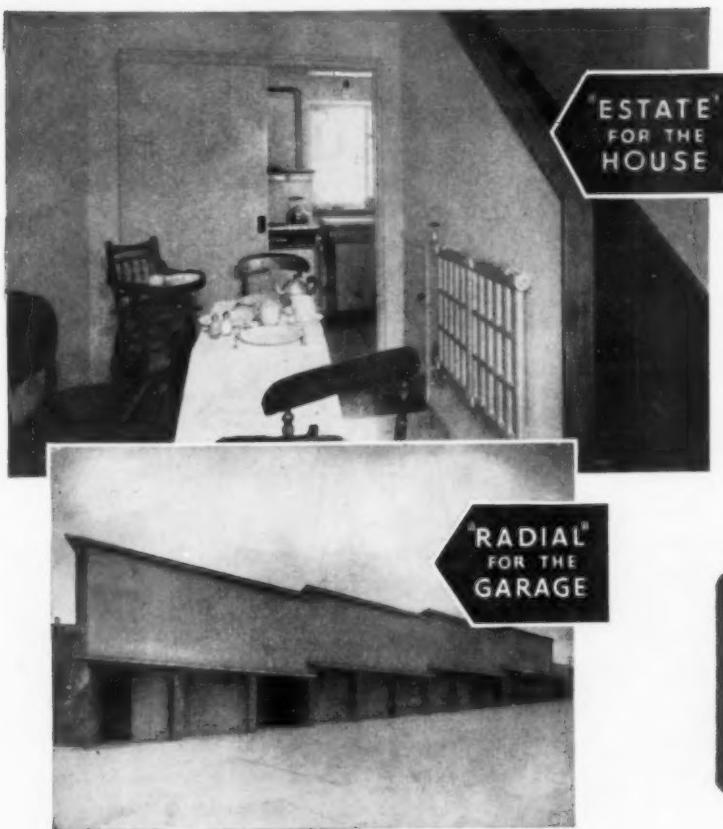
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ELLARD Sliding Door Gear is ideally suited for use on large housing estates and for the distinctive private residence. ELLARD "Estate" Gear is silent—easy running—troublefree, and has elegant appearance. ELLARD "Radial" Gear for garages and out-houses, provides smooth-running action, gives maximum space, and is easy to fix. Both these well-known types of ELLARD Door Gear are moderate in price and immediate delivery can be obtained from large ironmongers and builders' merchants throughout the country.

SEE OUR STAND

496 & 498

BUILDING EXHIBIT. OLYMPIA

CLARKE ELLARD ENGINEERING CO. LTD.
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Closing a gap

For two hundred and fifty years putty—good putty—has been the builder's friend, closing the gaps between glass and window frames: closing those gaps so effectively that putty stood alone for the job.

That is not enough for the builder of today: long service and tradition may fill history books, but the order books demand improved materials to match the progress of building.

British Whiting is the best in the world. There is no effective substitute for it and other countries buy it from Britain. Good putty consists of between 84 and 87 per cent of British Whiting allied to the finest raw linseed oil.

Given these components, what makes the best putty? What are the qualities that the glazier demands? And how can they be worked into putty?

Research workers spent three years finding the answers to those questions, and they discovered that putty can be made to give the glazier all he needs for his work.

By scientific control of the manufacturing processes this better putty can be made by every putty manufacturer. The product will have "length" with sufficient "stiffness".

If you need any advice or information on putty, please write to:

THE NATIONAL ASSOCIATION OF PUTTY MANUFACTURERS,
12 Buckingham Street, Strand, London, W.C.2.

THIS CERTIFICATION MARK IS YOUR SAFEGUARD

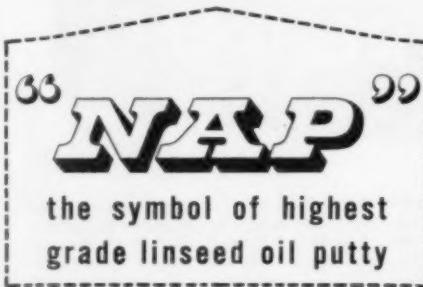


so that it is easy to work but does not sag in the frame. Made in this way it also keeps better, without getting hard, or oily.

In the words of a report on the research work: "It has closed a gap in our knowledge."

Putty is now made to this scientific standard by firms who mark their product with the symbol "NAP" the sign of certified linseed oil putty.

Putty has closed the gap between tradition and improved materials through research. "NAP" putty can go on closing the gaps between glass and window frames because science has worked out better ways of making it.





TenTest $\frac{1}{2}$ " Insulating Board forming the ceiling of St. John's Church, Orpington.

Architects :
Messrs. J. M. Colvin & Partners.



TenTest 'Rabbit Warren' Acoustic Board on the ceilings, and veneered Acoustic Panels on the walls of the London University Students' Union.

Architects :
Messrs. Adams, Holden & Pearson.



$\frac{3}{8}$ " 'Asbestolux' specially prepared bevelled edge panels fixed by TenTest as ceilings for the British Home Stores, Ilford.

Architect:
A. Walker, 129/137 Marylebone Rd.,
London, N.W.1.

Thermal and Acoustic Insulation fixed by
TENTEST FIBRE BOARD CO. LTD.

Fiboard House, Oakleigh Gardens, Whetstone, London, N.20

Phone: HILLside 8801. Telegrams: Fiboard, Norphone, London.

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REGISTERED TRADE MARK

ALUMINIUM SLATS AND VINYL PLASTIC TAPES

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**Snap-back
aluminium slats**

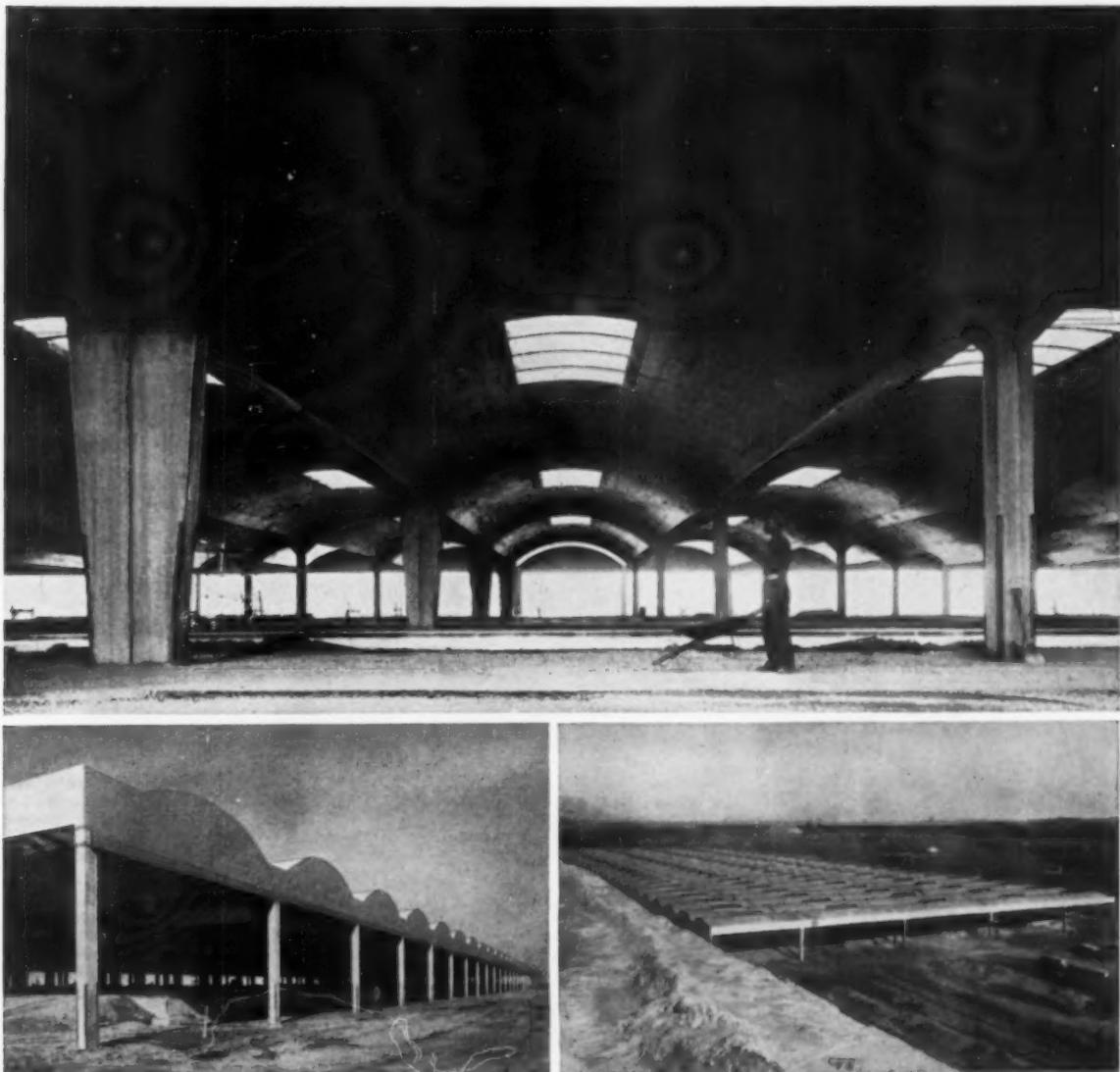
Duritized to snap back ruler-straight, even when bent to a 90° angle. Baked-on finish cannot rust, chip, crack or discolour!



**Insist on this
Trade Mark**

Be sure the blinds you specify carry the Luxaflex "visible-invisible" trade-mark on the slats. It is your guarantee of unrivalled quality.

CONCRETE CONTRIBUTIONS BY TWISTEEL



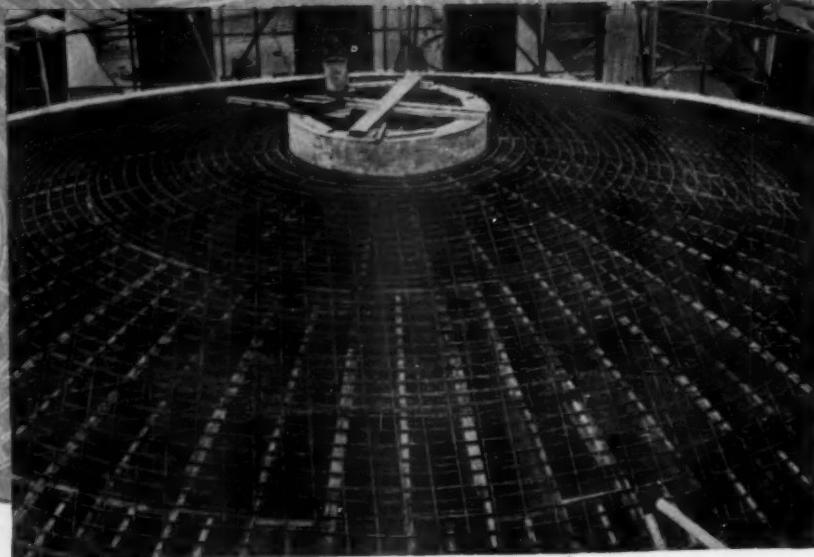
Kazernes Railway Sheds, Johannesburg, South Africa. Contractors: Messrs. Lewis Construction Co. (S.A.) Ltd.

To make sure of the highest standards in concrete design and construction, at the lowest cost in steel, money and time, call in the TWISTEEL Design Service. Their specialist knowledge, backed by many years of practical experience, enables them to advise architects and engineers, with certainty, on every aspect of design and planning for every type of construction involving the use of reinforced concrete: and they can also supply the reinforcement.

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"Expamet" can be of assistance to you. Write or telephone, we shall be pleased to advise in the choice and use of "Expamet" Reinforcements for any job you have in mind.

Dome at Barclays Bank, Exeter; showing "Expamet" Welded Fabric reinforcement and "Ribmet" permanent centering. Engineers: J. F. Farquharson & Partners, London, W.I. Contractors: J. Garrett & Sons Ltd., Plymouth.

Thickness of the concrete shell is 2½ ins., thickening out to 5 ins., at a distance of 3 ft. 6 ins. from the periphery, plus a 2 in. screed of light concrete. The dome is supported by a reinforced concrete ringbeam of columns, and has a diameter of 3½ ft. 6 ins., a rise of 5 ft. 2½ ins. and a 40 ft. radius of curve. A 5 ft. diameter central dome light is fitted.

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- 4 Delivery on schedule.
- 5 Technical advice and Literature.

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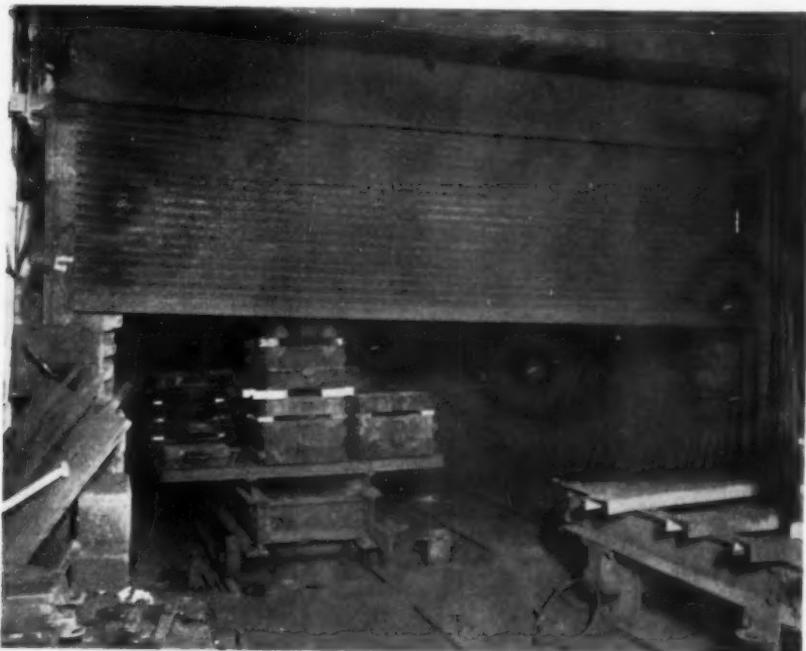
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a door for everyday general use, designed to serve in openings that require a good closure, and to give a long service life with minimum maintenance costs. The door is a Kinnear rolling steel shutter. In the illustration a Kinnear shutter has been used as the door to a mould drying stove at Cardiff.

Tailored to exact requirements a Kinnear Steel Rolling Shutter will ensure economy of installation, trouble free operation whilst giving complete protection against intruders and the weather.

JOHN WILLIAMS AND SONS



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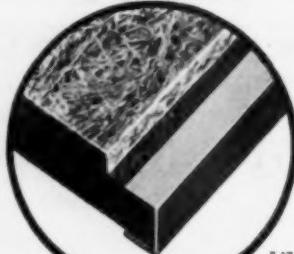
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THERMACOUST 3" Rebated Slabs provide higher overall insulation. They are specially designed for buildings where the atmosphere is exceptionally warm or humid. They are rebated to take 1" cork strips to prevent condensation on the steel channels.

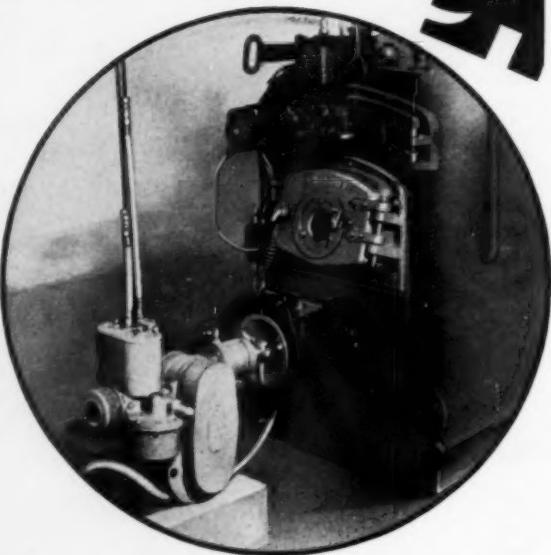
For information sheets and prices, apply to

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SHORROCK SUPERCHARGERS LTD.,
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Smoke Abatement

* **There
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with
A FLAVEL
FIRE!**



WE MAY perhaps be pardoned for turning the phrase for our headline, because it is true. Flavel smokeless fuel fires satisfy both the smoke abatement requirements of public authorities and the traditional British love of a friendly, open fire. This is why public bodies throughout the country are continually specifying Flavel smokeless fuel fires for new development schemes. These fires provide constant heat (controllable over a wide temperature range) and they burn for hours without being touched. Heat is delivered at near-floor level so that the whole room is warmed and practically no heat is

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The two models available at once for quantity delivery are the 'Newbold' and the 'Flavel Seymour'. Both are modestly priced and available in a range of varied and gleaming colours. They are styled to harmonise with either contemporary interior decoration or with more conventional schemes. Heavy-duty fire bars are a Flavel feature ensuring long service, and the long-burning attachment of the 'Flavel Seymour' can be dropped to form a convenient shelf and to expose

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* *The 'NEWBOLD' and 'Flavel SEYMOUR' burn best on smokeless fuel but they can use any solid fuel.*

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SMOKELESS SINCE 1920's

For new constructions, Flavels (who pioneered smokeless grates in the 1920's) also manufacture a full range of built-in labour-saving appliances, details and prices of which will be sent on request—or your Flavel stockist will gladly give you further information.

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Stainless Steel Domestic Sink Units

Planned for All Kitchens

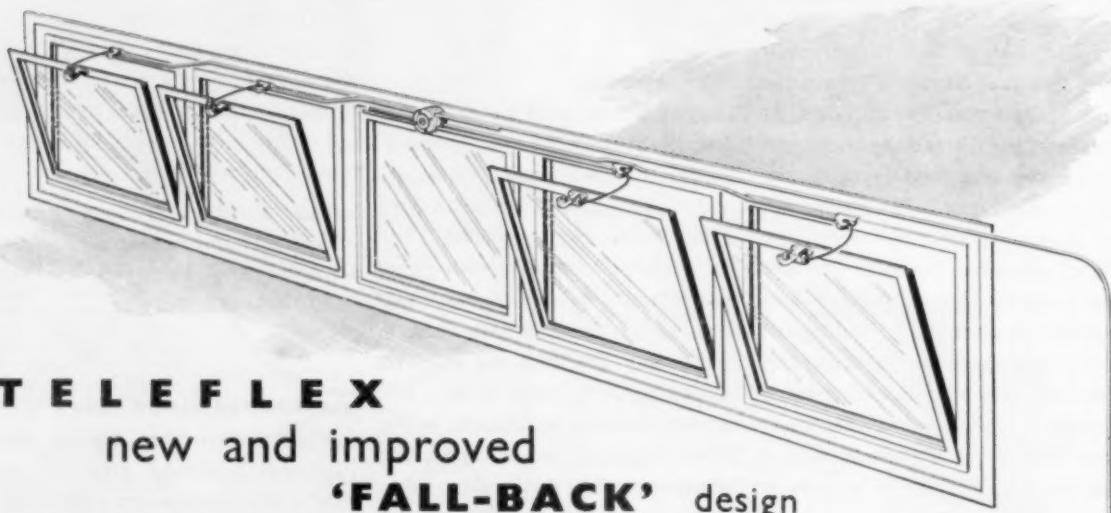
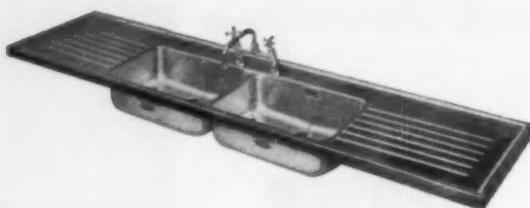
One piece sink units with stainless steel drainers and bowls. No joints to harbour dirt and infection. The most durable form of construction, will last a life time. The whole satin finished for ease of cleaning, long wear without marking, and free from reflective glare.

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'FALL-BACK' design

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- Less than 2½" internal projection of gear with window closed.
- Positive cam locking of each window when in closed position.
- Powerful thrust from cam mechanism during initial opening movement.

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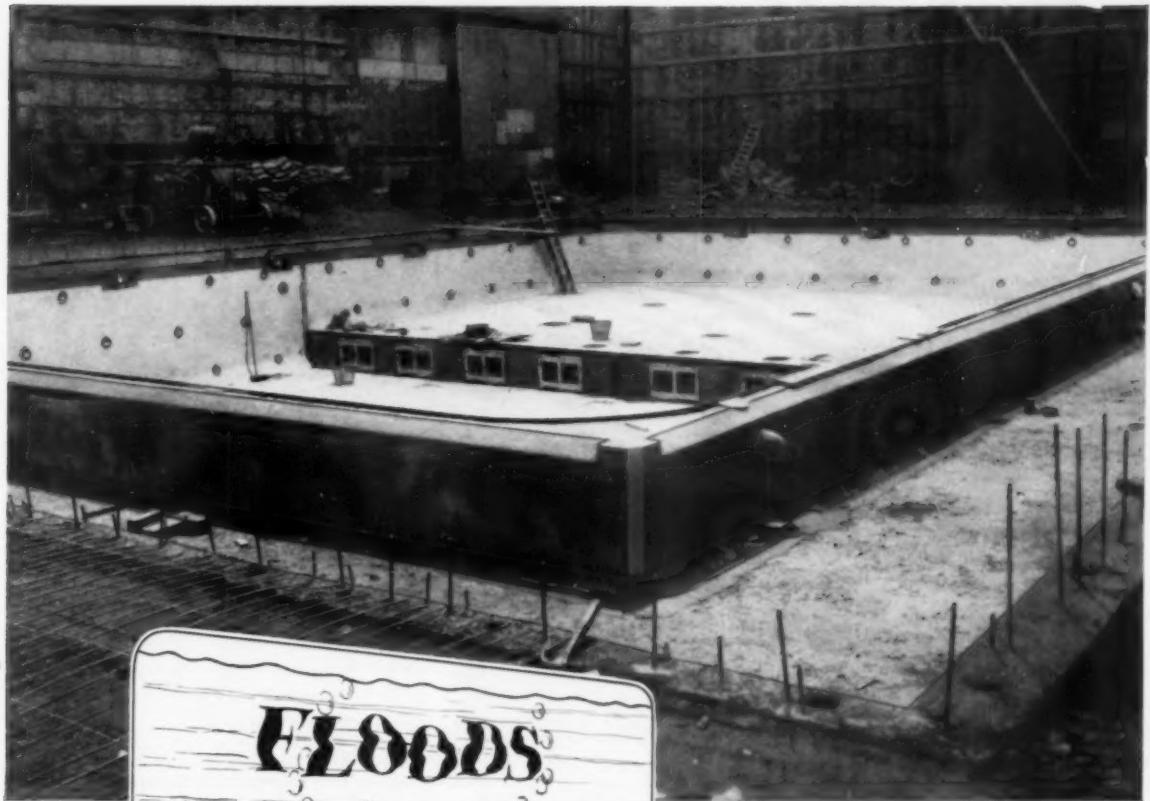
We should be glad to send you further details promptly on request.

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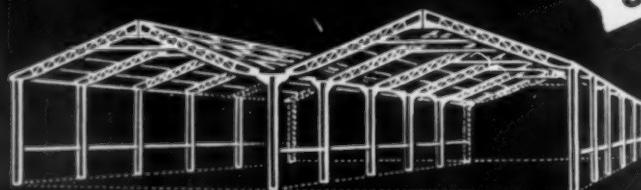
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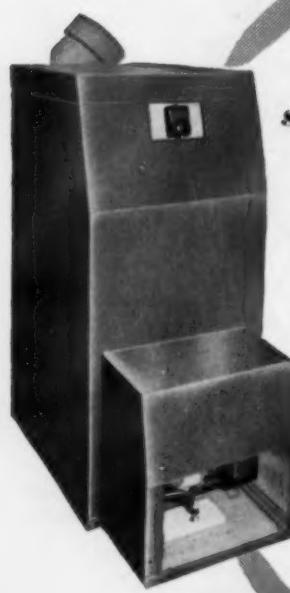
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No ordinary boiler can match performance with the new KAYENCO 'HIKON' . . . the oil-fired boiler with a flue-loss of only 14% and a guaranteed net efficiency of 80%. These remarkable figures result from its high degree of convection extraction, achieved through skilled design and precision engineering by specialists in oil-fired boiler manufacture.

FEATURES OF THE KAYENCO 'HIKON' ARE:

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Models from 125,000 B.T.U.
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OIL-FIRED BOILERS

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KAYENCO 'HIKON' O.C.2
Output: 200,000 B.T.U.
Oil Consumption: 1.5 g.p.h.
light domestic.
Size: 60" x 28" x 55"



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Time alone can substantiate the claims for a building material. Lime/sand mixes gauged with cement have proved the ideal mortar for all types of construction. Lime/sand/cement mortars can be designed to give maximum strength to the brickwork in relation to the particular strength of the brick used.

(See B.R.S. Digest No. 75 on the strength and stability of walls.)

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SCIENTIFICALLY HYDRATED LIME
COMPLIES WITH ALL THE
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A REVOLUTIONARY NEW INSTRUMENT FOR
LAYING OUT RIGHT-ANGLES . . .

The Sitesquare, an optical instrument, designed by the makers of the famous Cowley Level, is indispensable for Builders, Architects, Fencing Contractors, Groundsmen and many others who lay out or check right-angles. It replaces the 3-4-5 method and the wooden square. It can also be used to check verticality.

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Instrument erected in 1 minute, angle set out in less than two minutes.

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Instrument can be mastered by an unskilled man in about 5 minutes.

* RELIABLE

The range is over 100 feet. An angle can be laid out to 1" accuracy in 100 feet.



STANDARD OUTFIT . . . £18

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FLAT . . .



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Illustrated here is a round bowl unit which is 3 ft. 6 ins. x 1 ft. 9 ins., with right or left hand bowl 17 ins. top dia. x 7½ ins. deep. Other units incorporate the normal rectangular type bowl. Many designs are available together with attractive wooden under-cabinets beautifully furnished either in cream enamel with various coloured handles to match individual schemes, or modern light oak.



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Choose from a wide range of standard models or have sinks made to your own specifications

More and more the emphasis is on stainless steel for modern washrooms, kitchens and dairies; and more and more architects are specifying "sinks by Sissons." They find that whatever the requirements, Sissons supply exactly what is needed. Sissons range of standard models covers a host of purposes and Sissons specialise in manufacturing sinks to customers' specifications. Whether you are building a factory, a block of flats or a farmhouse, Sissons sinks suitable to your plans can be supplied. Write today for descriptive literature.



Models may be seen at the Building Centre, Conduit St., London W.1.
OA/30

STAND 94 ROW E

THE BUILDING EXHIBITION OLYMPIA



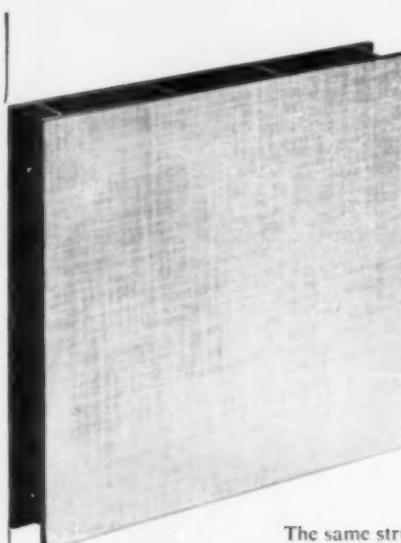
Architects, Builders and Surveyors are invited to discuss
with our technical representative any question relating to Plastering or Internal
Linings and Partitions. Our Stand will feature the application of 'Paramount' Dry Partition
as Internal Linings to Curtain Walling and demonstrate Thermal Insulation,
Fire Protection, Suspended Ceilings, Sound Control and Plastering. Technical Films
will be shown throughout the run of this Exhibition in the
Company's own Cinema.

THE BRITISH PLASTER BOARD (MANUFACTURING) LIMITED
BATH HOUSE, 82 PICCADILLY, LONDON, W.I

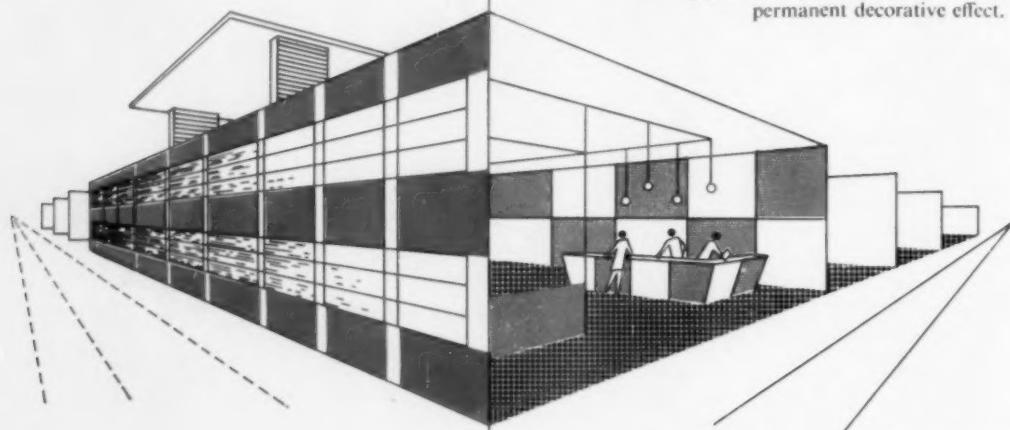
THE 'DECORPLAST' CAVITIED STRUCTURAL PANEL

This first-class structural unit has all the advantages of the well-known 'Holoplast' cavited panel plus the extremely decorative 'Decorplast' surface—incorporating a hard wearing melamine resin which is highly resistant to food, acids, fruit juices, fats, oils, boiling water etc.

Some of its many important uses are 'movable walls', partitions, furniture for shops, restaurants, bar and factory fittings, and for ships' bulkheads and cabin construction.



The same structural, thermal and acoustic functions as the standard 'Holoplast' panel—and in addition a permanent decorative effect.



SIZES

Standard Overall Panel Thicknesses

1½" and 1"

Standard size of panel

8' 0" x 4' 0" wide

Max. size for use externally

4' 6" x 4' 0" wide

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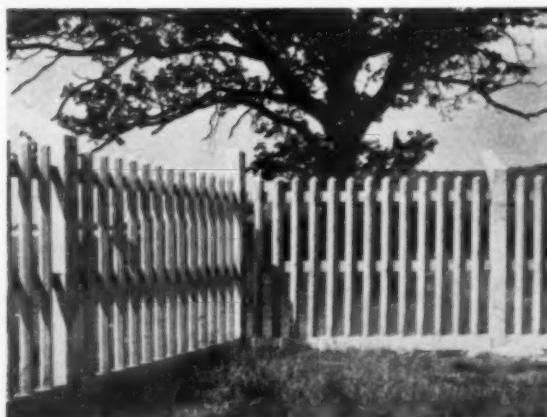
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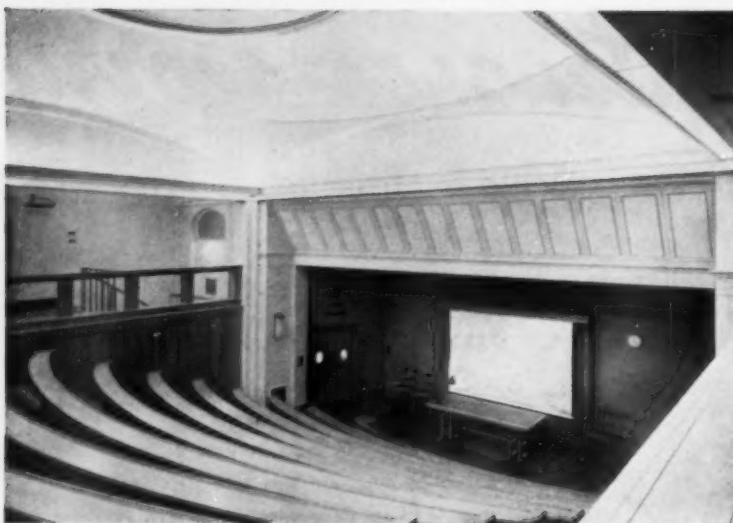


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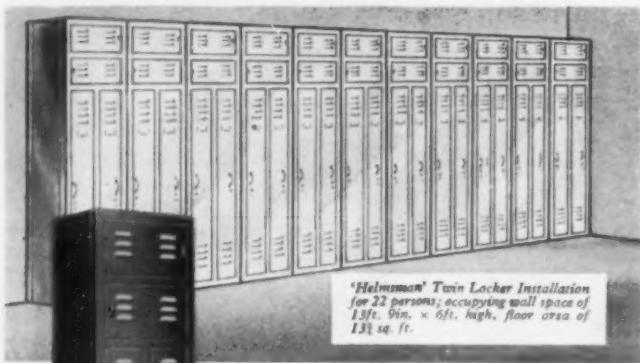
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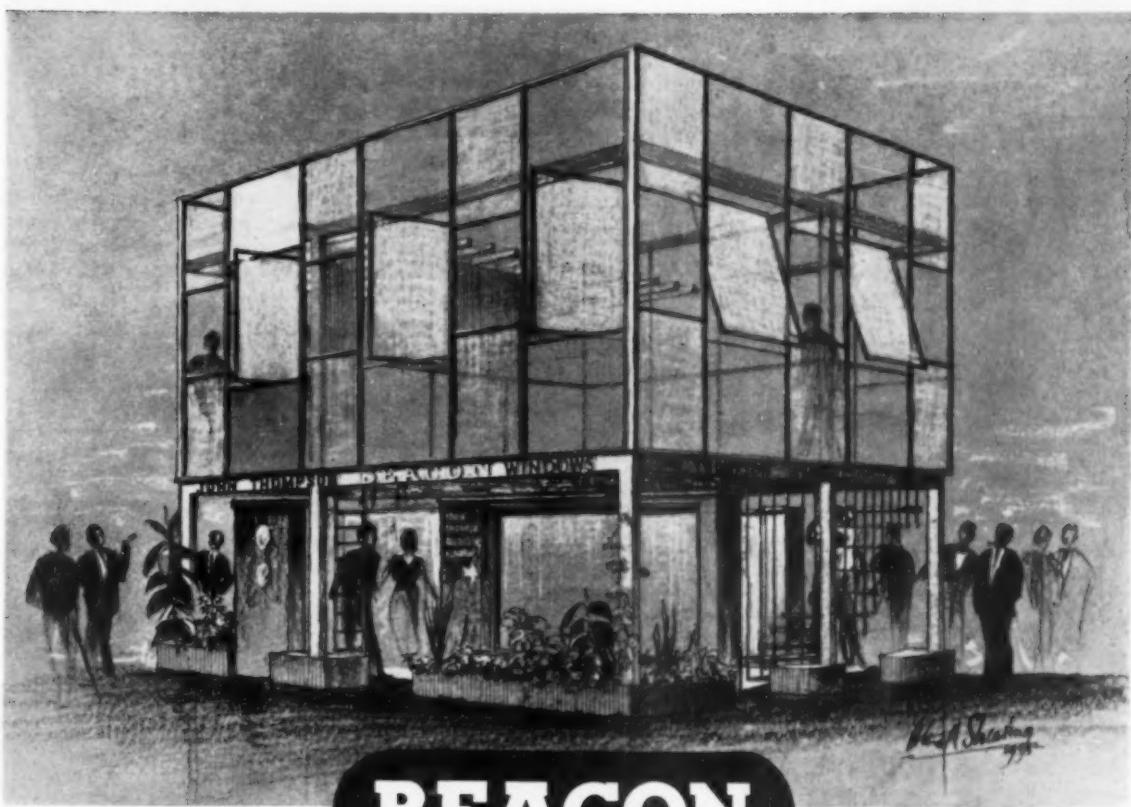
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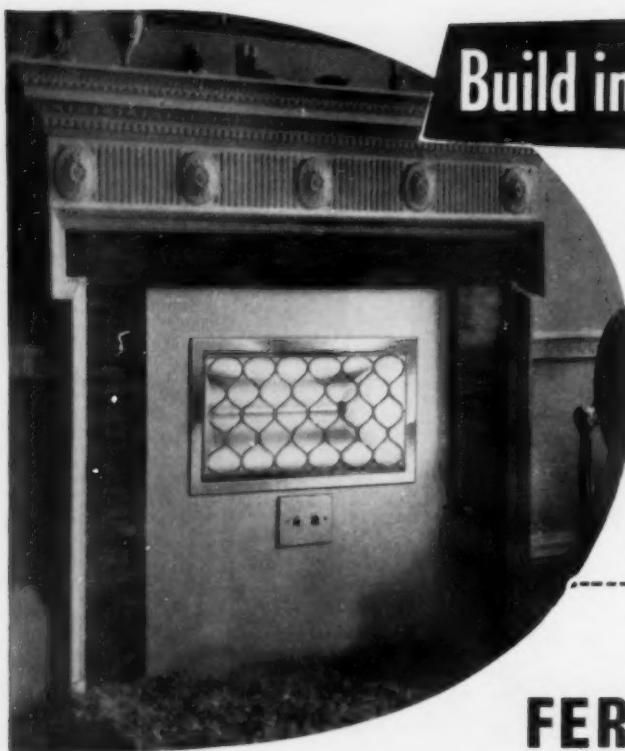
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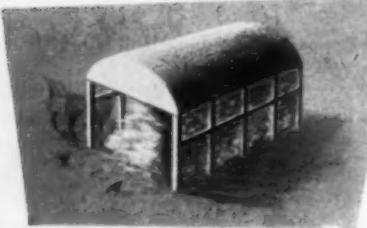
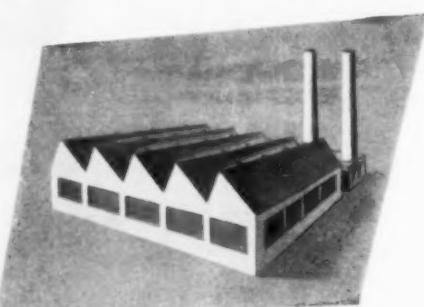
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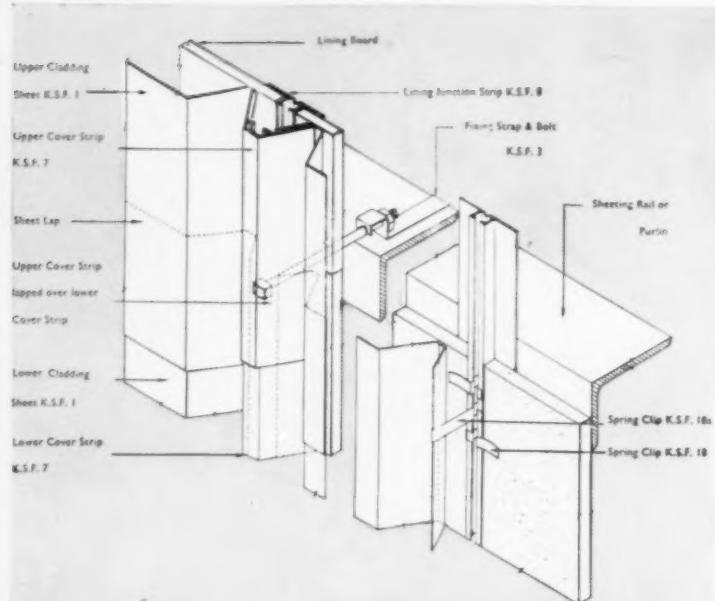
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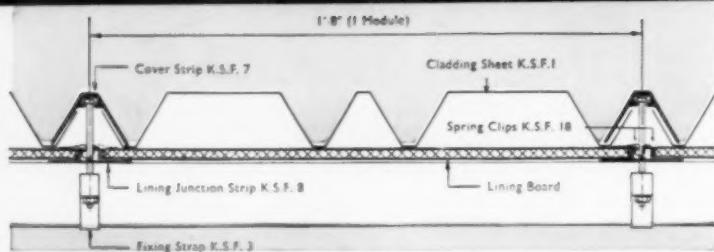
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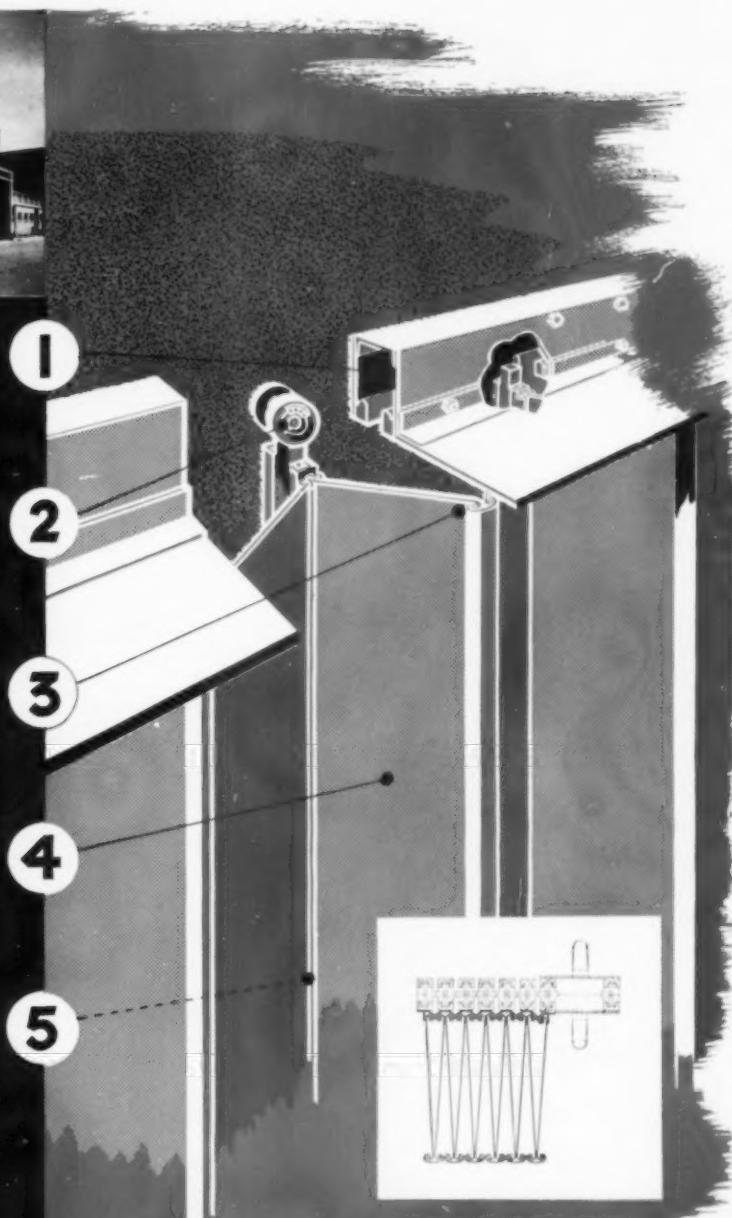
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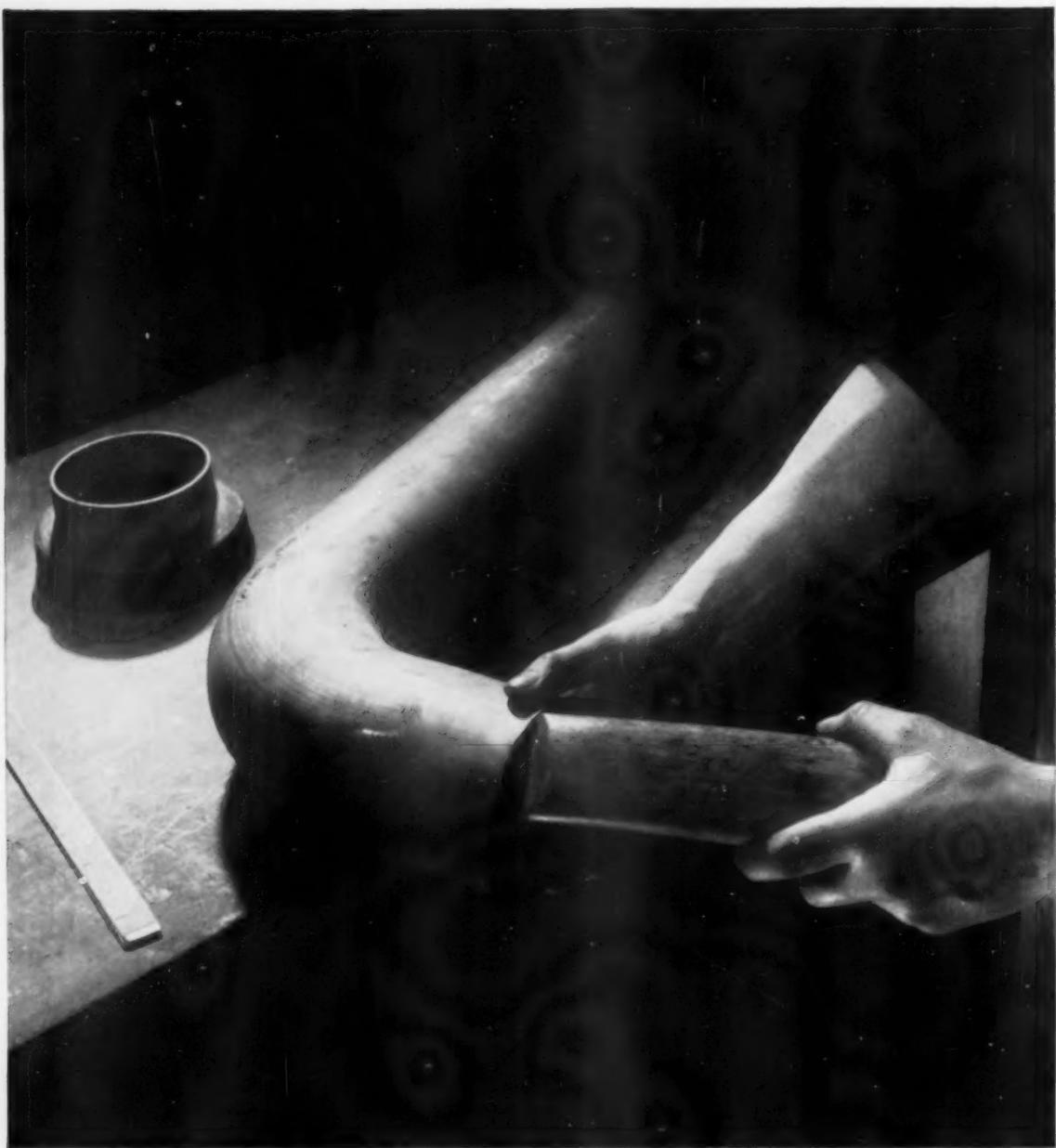
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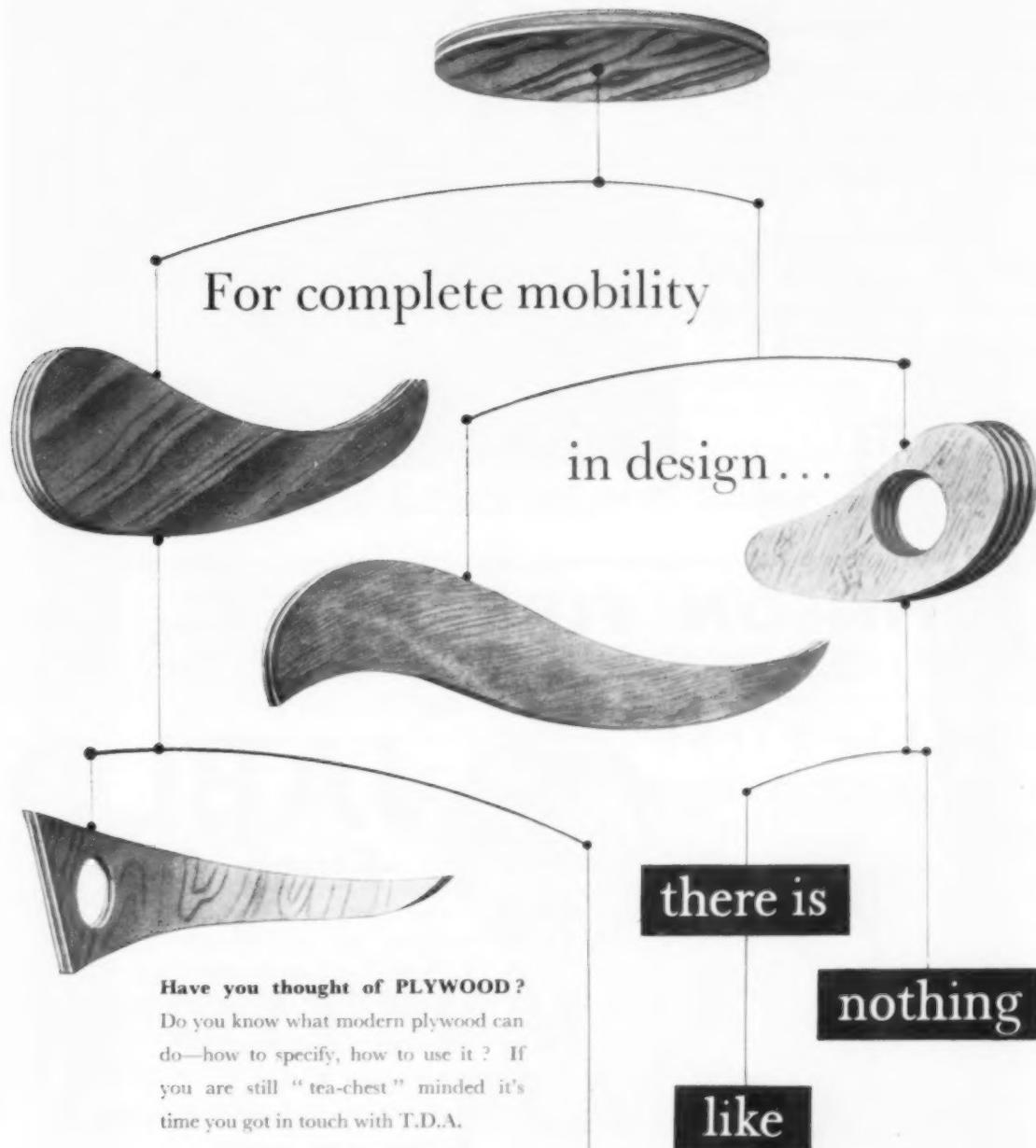
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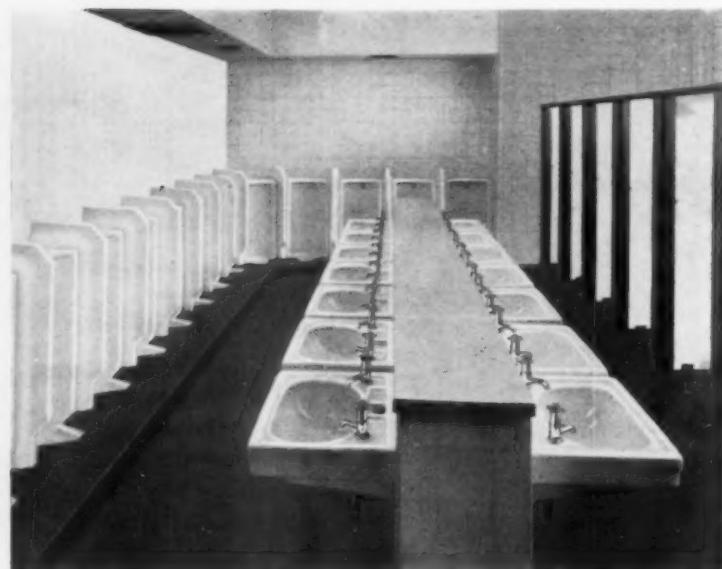
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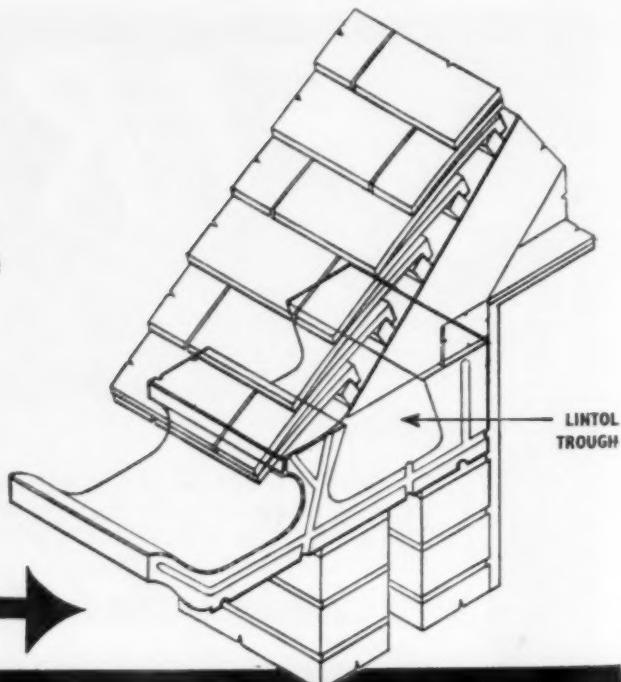
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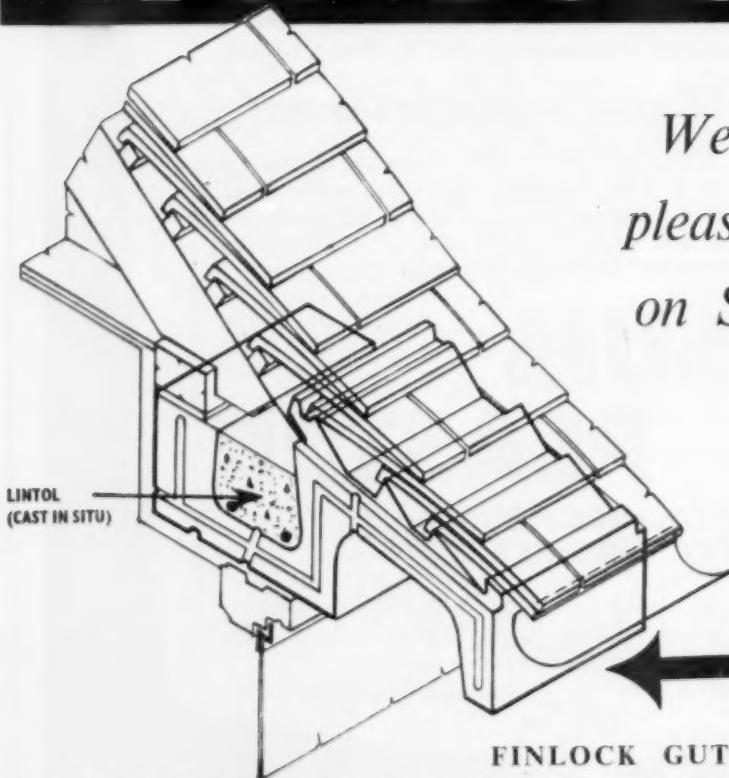


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24 November 1955

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PIRATES AND POACHERS

JUDGING from the waves of correspondence which periodically break over the professional press, the architectural ship of state is much in danger from the fleets of galleys flying the Jolly Roger. If one accepted some of the distress signals uncritically one would think the ship was about to be sunk and her crew of law-abiding qualified private practitioners made to walk the plank. The people of whose activities there have been such bitter complaints lately seem to fall broadly into two categories. There are those with no architectural qualifications or training at all: perhaps these might be called the pirates proper. There are also those qualified architects whose livelihood is earned in salaried service and who do private work on the side as well. Bringing the metaphor ashore, we might call these by the name applied by some correspondents, poachers.

Most of the complaint voiced about poachers is in regard to salaried architects and assistants in government service who do private work in their spare time; but if the complaints are morally justified the censure must extend equally to salaried assistants in private practice who do a bit on their own. Extending this argument, one might then say that the unwritten tradition by which a man works himself up into a connection as a private practitioner by doing a house for a relative or a bathroom extension for a friend is wrong. It will follow that the only ways of setting up in private practice are either to sit quietly and starve at home till someone offers a commission or to buy into a partnership. Either course is surely equally reprehensible, and even impossible, in the modern welfare and anti-capitalist state.

It is tempting to follow the logic of the argument to absurdity and to ask whether architects holding full time teaching appointments should undertake private practice and, still further, whether principals in private practice ought to accept commissions to write, lecture or broadcast; for such activities are poaching on the preserves of professional writers and radio comedians. Luckily a certain penchant for sensible illogicality is a national characteristic and we can draw an agreed line limiting the discussion to the undertaking of private

work by salaried assistants, be they officially or privately employed. In regard to poachers, therefore, the questions are simply whether a salaried assistant in full time employment who does some private work as a side-line is thereby wronging his employer, his private client, his professional colleagues or architecture as an art.

Only the employer can be the judge on the first question. The old principle of contract between man and man, still holds. If the assistant's private pre-occupations, whatever their nature, are such as to reduce the diligence of his services to his employer he is not fulfilling his part of the contract, but no-one except the employer has any right to interfere. Whether he is wronging his private client depends on circumstances. If he is doing a really large job and cannot give that proper supervision envisaged in the R.I.B.A. Conditions of Engagement and Scale of Charges he is defrauding his client: but such cases must be rare. The vast majority of these private commissions are undoubtedly minor jobs, most of them requiring only partial services and so allowing the spare-time architect to give his client all that is asked for.

It is perhaps more difficult to answer the third question. Almost all the protest made has come from principals in private practice who understandably see in these activities competition with, and a threat to their own practices. They think it wrong that a man having a regular income behind him should also compete in the now restricted field of private practice, but they do not extend their objections to those of their own number who have wealthy wives, private means or an income from a farm or such-like. The answer to this question must be quite definite. Provided the assistant does not compete by any improper inducement in regard to wangling by-law approvals if he be in official service, or fee-cutting however he be employed: both activities are contrary to the Code of Professional Conduct: he has a perfect right to do the work which is competition with private practitioners but not in any way improper competition. If a man has qualified as an architect after a long and arduous training it is quite

unacceptable that his professional institution or any section of his professional colleagues should restrict his right to practice architecture within the ethical limits laid down for the profession as a whole.

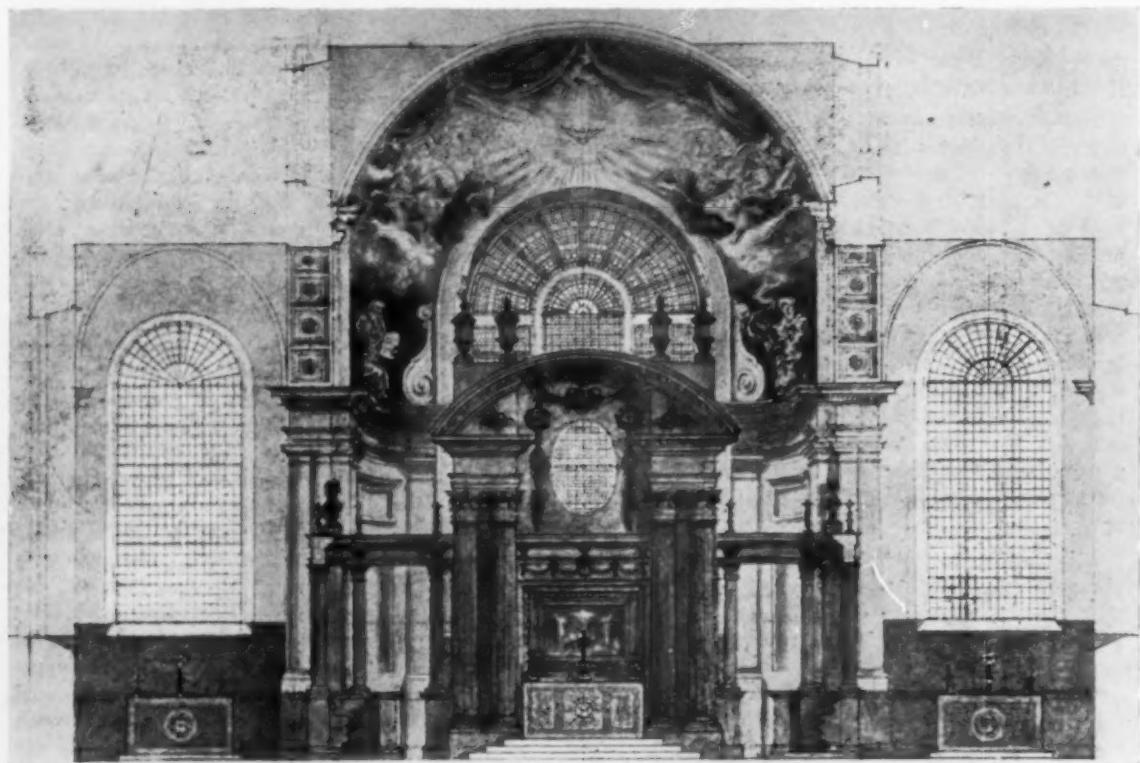
As to the fourth question whether the poacher is wronging architecture as an art, it is certainly better that a trained and qualified man should do those small jobs which in fact many principals regard as unremunerative and time-wasting. Aesthetics and planning are certain to be better on an average than if they are left to the unqualified.

This now launches us again, back to the pirates proper. There is no doubt that a large volume of architectural work is being done by unqualified men and much of it of inferior quality. The R.I.B.A. committee who studied this question and whose report was published two years ago spoke of up to fifty per cent. of all plans submitted to rural authorities, down to about ten per cent. of all plans submitted to urban planning authorities as being put in by unqualified men. They added, however, that there was evidence that the volume was made up of individually small projects.

Here the answer can be equally definite. This piracy is wrong and harmful. It harms the client, the profession, architecture and the country as a whole. The client gets a skimped job at a cut price and as often

as not fails to get planning consent. The profession is losing work, though much of it neither interesting nor lucrative. Bad architecture is being perpetrated and as often as not the profession is blamed, for to the layman almost anyone who designs a building is an architect. Lastly the country continues to sprout a rash of ill-conceived, poorly proportioned and badly sited buildings finally ruining what little beauty is left on an already diseased face.

The remedies are neither easy nor immediately to hand. There is no immediate prospect of legislation to restrict the practice of architecture to those qualified or even to require that all officers entrusted with the duty of approving plans must be architects. These are simply not within the realm of practical politics at the moment. Not enough people in the country are yet alive to the dangers. The number of people in the country, for instance, who want state lotteries far exceeds the total of the architectural profession but we haven't got state lotteries yet. Legislation is a long term project requiring the will of the majority of the nation. Meantime the profession must do what it can. It can do much. Personal influence and local contacts are invaluable. If in every region the local architectural societies lose no opportunity of convincing those in authority locally of the value of the trained architect's work much will be achieved. More can be achieved



Design for the new East end of St. Bride's, Fleet Street, by Mr. W. Godfrey Allen, F.R.I.B.A.

by architects entering actively into local government where the power is exercised. Something can be done by greater readiness to accept small and tiresome commissions involving partial services only and something, too, by a general effort to reduce the considerable volume of complaints from dissatisfied clients which reach the correspondence departments of the various periodicals devoted to housing, the R.I.B.A. and the A.R.C.U.K. A very great proportion of these complaints concern dilatoriness in correspondence and lack of supervision. Lastly the profession might indulge a little less in mutual quarrel and criticism and turn more unitedly against the aesthetic shortcomings of the work of the unqualified.

E V E N T S A N D C O M M E N T S

MARTIN FOR CAMBRIDGE

I am very pleased to see that my guess that Dr. J. L. Martin would be appointed to the Chair of Architecture at Cambridge has been proved correct. Dr. Martin is a distinguished designer who has done excellent work at the L.C.C. both under Robert Matthew and as Architect to the Council. All the same he has never struck me as being precisely the right man for so tough a job. He will I think make a first-class professor and we may expect great things from a revivified Cambridge School under his direction. Dr. Martin's experience with the L.M.S. Railway and the L.C.C. will put him in a special position in the world of teaching and we may expect to hear more of him through the Board of Architectural Education.

As for the L.C.C., it has my sympathy. To lose Robert Matthew and Dr. Martin within 4 years is a severe blow. It is the kind of thing which in other walks of life would make headlines in the cheaper press. Insinuations would be made that all was not well at the L.C.C. and so on. Each suggestion would, I think, be far fetched for it seems to me that the Architect's Department of the L.C.C. is going from strength to strength. What I do think, however, is that the running of so large and complex a department is not congenial to the type of architect who is unhappy when he is away from his drawing board. A very special type of person is required. It needs to be a man who knows good architecture when he sees it, can pick good men and keep them, is a good administrator and can talk well at all levels in the Council's hierarchy. There is a danger that the L.C.C. after its experience may be inclined to go for a senior official architect as a matter of policy. I suggest that they should go for a strong personality first with local government experience as a lesser consideration. Such people are not easy to find.

I have also just heard that Leeds University has appointed Mr. Basil Spence Hoffman Wood Professor of Architecture for 1955-6.



Photo : Margaret F. Harker

The Council of the Senate at Cambridge has recommended the establishment of a Chair of Architecture and that, subject to confirmation, the professor be Dr. John Leslie Martin, F.R.I.B.A. Dr. Martin would take up his appointment in October, 1956.

THE BUILDING EXHIBITION

Acoustically the Pillar Hall at Olympia must be among the worst places for speeches in London. This year, the loud hailer worked and for the first time I was able to hear the speeches at the opening of the Building Exhibition. The P.R.I.B.A. as President of the Exhibition was in the chair. He has developed a compère-like quality of speech which enabled him to perform his task admirably. Mr. Nigel Birch was cheerful and to the point but I find myself quite unable to recall a word of what he said. Mr. Harvey Frost, president of the N.F.B.T.E., who is also a good speaker thanked the Minister and Sir Luke Fawcett seconded. Sir Luke, obviously working on previous experience, nearly burst the amplifying system by assuming that it was not working and addressing us as though we were at an outdoor meeting in a gale. Roughly speaking the talk amounted to this, the industry has done splendidly on the one hand but must strive even more in speed and productivity; on the other the Minister and all his predecessors were most excellent fellows and the industry could never have done what it has done without the co-operation, initiative, drive, enthusiasm, etc., etc., of the Ministers and all their Works. Meanwhile, the Fawcett family goes on laying bricks. Sir Luke's grandson having recently won a prize at it.

The assembled company was much as usual with the addition of another delegation, twenty-strong, from guess where?

The Exhibition fully reviewed—I hope—elsewhere in this issue is truly better than ever. The standard of design is undoubtedly the highest yet and if there are no tremendous flights of fancy like the famous Lafarge stand of 4 years ago there are very few bad exhibits, no Greek temples, and even the oldest surviving member has had a coat of white paint and been put on another site.

The Ascot competition winning stand by Mr. Dennis Pugh is a great success and looks very well indeed. Carters have a most interesting exhibit with some really lovely lettering and decoration. A certain similarity has crept into many stands. Two stories being popular and curves virtually out we have a mass of cubes and boxes, more or less framed up, in wood or metal, but mostly in wood. This is the big change from the last show. The L.C.C. now requires alternative means of escape from the first floors of stands and this accounts for some quaint and somewhat dangerous looking means of descent.

For skill in showing building materials, well I once again commend Eastwoods exhibit by Eastwick-Field and Stillman, for new ideas and pure design, Chance Bros. display of coloured glass, tucked away in the gallery, designed by Margaret Casson.

I had another look at the also rans in the Tretol Competition. There are some very remarkable contributions. One scheme might have been designed and drawn jointly by Jaggard and Drury so faithfully was the technique and detail reproduced. One competitor submitted the photograph of a complete house in place of the called for perspective. Another designed his entry in the form of an octagon with a central tower and lantern. One or two were so bad that even their authors should have noticed it.

The R.I.B.A. Club has been much improved with brightly coloured furniture in place of the old brown stuff. The smell of last year's fish and chips has it seems been exorcised.

On my rounds I passed alternately through clouds of gaulois smoke issuing from a crowd of French contractors and that indefinable perfume which has so far surrounded all our Russian visitors.

May I remind all readers of the R.I.B.A. Journal that their last issue contained a card giving free entry to the exhibition for two, free tea for two and far more important, 3s. 6d. for the A.B.S. IF handed in at the door.

FRANK YERBURY 70

Many congratulations to Frank Yerbury who was 70 last week. I hear that tributes in word and kind have been pouring in from all the countries civilised enough to have a building centre and from many others as well. If one was asked to name one man who embodies every branch of the building industry from architect to

journalist by way of builder and manufacturer I can think of no better choice than Yerbury—Ambassador of the Industry.

SAVE THIS COTTAGE

I have had a letter from Mr. Charles Oppenheimer, R.S.A., R.S.W., who is appealing for the sum of £1,500 to restore and adapt an 18th century cottage which forms one of a notable group of white buildings beside the harbour of Kirkcudbright. The National Trust of Scotland strongly supports the idea. I myself do not know the group. But if any of my readers do, and wish to make a contribution, please send your cheques to Mr. Eric C. H. Forbes, C.A., Bank of Scotland Chambers, Kirkcudbright, and make them payable to "Kirkcudbright Harbour Cottage Fund."

NO CAR PARKS UNDER SQUARES

Thank goodness the right decision has been taken on this matter vital to the future of London squares. I am sorry for the architects who prepared the pilot schemes but I imagine that they have been suitably recompensed.

ABNER

A FOOTNOTE TO ABNER

In our issue of November 3 Abner tells how on catching sight of the Petite Trianon he was reminded of the "odd things" seen there by two English ladies; and as he has assumed that the book, *An Adventure*, in which they were first, in 1911, recorded, with later editions lending to show their psychic origin, is known to readers of *The Architect*, it may be of interest to add that a collated edition comprehending all of any consequence that has been written in elucidation and criticism of these "odd things" edited by Dr. Joan Evans, has recently been published, and that a matter largely destructive of the significance of the book has been uncovered.

An Adventure, in brief, tells how two ladies, its joint authors, on a certain day entered the gardens of the Petite Trianon by a remote gate, and after perambulations, passed to the public road close to the main entrance of the house where they joined a group that was being conducted over it.

Some days later they discovered, in casual talk, that each of them held very similar confused and uneasy impressions of their experiences while in the garden; and these were so inexplicable that they made another journey from Paris to compose them. On that second visit they scarcely recognised the scene: paths they had traversed, buildings, grass, a ravine, bridge, waterfall and kiosk were gone and what they now saw was in great part new to them. They further became persuaded that certain oddly-dressed persons they had seen, some of whom had spoken to them, were as unreal as the scenes they had figured in.

During the years that followed research in obscure archives by themselves and others yielded material for new editions of the book which was now concerned to adduce evidence that the "odd things" were such as had existed shortly before the march of the revolutionary mob on Versailles, and even surmised that a lady seen sitting on the terrace personified the Queen!

It was during a close reading of Dr. Evans's collated edition that I happened on the circumstance referred to as being largely destructive of the significance of the book. Dr. Evans, while agreeing with the cogency of my com-

1.



2.



A black and white ink sketch of a coastal landscape. In the foreground, dark, craggy rocks are partially submerged in turbulent, swirling water. In the background, a large, rounded island or headland rises from the sea under a hazy sky.

A black and white sketch of a tropical landscape. In the foreground, there's a cluster of palm trees and dense tropical foliage. To the right, a large, craggy rock formation or cliff face rises, its surface covered in dark, textured vegetation. The ground appears sandy or light-colored, with some darker patches. The sky is filled with soft, hatched clouds.

3

SITE FOR THE PROPOSED FEDERAL CAPITAL OF PAKISTAN

THE site for the proposed Federal Capital has now been selected and lies some 20 miles to the east of Karachi where the Central Government is at present accommodated.

The Central Government is at present accommodated. These illustrations show something of the character of the locality, and are chosen from a series of sketches made recently by Patrick Horsbrugh who stayed on the site: 1. The hill which is the dominant feature of the site as seen when approached from Karachi. 2. The cone shaped knoll and ridge which rise above the series of broad terraces of which the central hill is composed. 3. The view westwards from the cone shaped hillock showing the northern terraces, each many acres in extent. 4. Irrigated plantations which are included in the designated area.

ment, tells me she does not recall its ever having been put forward in print; and Mr. W. H. Salter, a past President of the Society for Psychical Research, and a leading exponent of the issues raised by the book, endorses Dr. Evans's opinion.

Here then is the crux of the matter. The two ladies state circumstantially that in their objective corporeal being they followed a definite course through the garden from entrance to exit. While doing so they had, admittedly, purely subjective experiences through the medium of sight and hearing (the senses of smell, taste, and touch were not, I observe, involved). Apparently they overlooked that the particulars they had given of their exit from the garden were part of their corporeal objective

experience, and grouped it with their subjective (or psychic) experience, for in later writings they speak of the "discovery" in ancient maps or records of the *earlier existence* of the open way they had traversed to the public road; yet that open way at the time of their visit, and for a century before, had been built upon, so that they could not have traversed it without walking through two or more brick walls!

Since the whole fabric of the book is built on a declaration of facts of which an essential one is here seen to be a bleak impossibility, what value can be given to accounts of "odd things" of psychic — or shall we say visceral origin?

H. B. CRESWELL.

Soviet Architects in Trouble

AT the present time the profession of architect is far from being a happy one in the Soviet Union. It has no security of tenure at all and severe occupational risks: many architects who were the darlings of the Stalin-Malenkov regime are now under suspicion of indulging in "architectural extravagances." Some have been dismissed, others have suffered the even more severe punishment of being deprived of their Stalin Prizes. Reprimands and warnings are at present as numerous as the pillars and towers on the new buildings in Moscow and Baku. The situation is regarded as being sufficiently serious to call for a Decree of the Central Committee of the Communist Party of the Soviet Union and the U.S.S.R. Council of Ministers, signed by Khrushchev and Bulganin and published on November 10.

The Decree is an interesting, and in many ways entertaining, document. Its main charge against the architects, who it must be remembered were only carrying out the Party directive of the time, was that they produced buildings whose style was "overornate," "historicism" or "wasteful of State money and unconducive to comfort and convenience." Having listed, in very general terms, the successes of the building industry, the Decree goes on to detail the "crimes", saying:

"The Central Committee of the C.P.S.U. and the U.S.S.R. Council of Ministers point out that in the work of many architects and planning organisations the ostentatious aspect of architecture, abounding in great extravagances, has become predominant—a feature not in accordance with the Party and Government line in the sphere of architecture and building. Carried away by the ostentatious aspect many architects are engaged chiefly in adorning the façades of buildings; they do not work on improving the interior lay-out and facilities of houses and flats; they neglect the necessity for creating amenities for the population and they disregard the requirements of economics and normal exploitation of buildings."

"Utterly unjustified tower superstructures, murals, decorative colonnades and porticos, as well as other architectural extravagances borrowed from the past, have become common phenomena in the construction of residential and public buildings. As a result, a great amount of State funds has been overspent on the building of

dwelling houses, which could have been used for the building of millions of square metres of living space for the working people."

One wonders very much whether these criticisms are directed at the recently-completed Moscow University building, which has its full share of the tower superstructures and other features criticised in the Decree, and the elaborate building of the great G.U.M. store. Stalin is reputed to have had a considerable say in planning both of them.

Certain buildings are criticised individually. The new dwelling houses in Uliitsa Gorkogo (architect Zhukov); in Mozhaiskoye Chaussée (architect Kisylim) and Leningradskoye Chaussée (architects Gotlib and Selkevich) in Moscow are said to have an "archaic appearance" and an inconvenient lay-out. The much publicised Leningradskaya Hotel, standing in the Kalanchovskaya Ploschad in Moscow is singled out for special criticism. The architects Polyakov and Boretsky are said to have spent as much money on its 354 rooms "as would have been necessary for an economically planned hotel with 1,000 rooms." Both have been deprived of their Stalin Prizes. Two persons well-known to visiting foreign delegations, Chechyrin and Vlasov, the former chief architects of Moscow City are severely censured. The criticism covers buildings in most of the larger cities in the Soviet Union.

The Decree does not pull any punches, and hands out blows to the chin all round. The Academy of Architecture is charged with being "the exponent of a narrow, aesthetic conception," while the architectural section of the Committee for Stalin Prizes is censured for making false awards. The previously important and influential State Committee for Construction Affairs is not spared, nor is the Union of Soviet Architects, and the decree contains several references to the "former leaders" of these bodies. In the Soviet Union the word "former" used in this context has a somewhat sinister ring.

It would appear that from now on the new and purged force of Soviet architects are to forget most of the characteristics of Russian building since the war. Towers, murals, decorative arcades, colonnades and porticos, expensive wood panelling, gilded and painted cornices and ceilings, gilded grilles, and turreted superstructures, are now banned. All existing building plans are to be reviewed, revised and re-costed. New standard designs for flats, schools and hospitals are to be worked out, and competitions organised to stimulate

ideas. A Central State Institute of Standard Designs for Residential and Public Buildings is to be set up, and the U.S.S.R. Ministry of Higher Education is ordered to submit, by March 1, 1956, "proposals for a radical improvement in the training of architects." It is evident that architects and builders in the Soviet Union are in for a trying and uncomfortable time. It would, perhaps, be rubbing salt into an open wound to ask them whether the new Soviet Institute of Standard Designs has been inspired by the B.S.I.

JOHN BAKER WHITE.

A.B.T. Statement of the Housing Subsidies Bill

THE new proposals of the Government on subsidies for housing are likely to be so far-reaching in their effects that the A.B.T. has felt it must make known its views, while the new Bill is still under consideration.

Our concern is, firstly, the reduction in local authority building which will result, secondly, the effects on development within the blighted areas of our industrial towns and cities and, thirdly, the inevitable lowering of housing standards.

The prospect of a reduction in local authority building has been welcomed by some as affording relief to the overburdened building industry. We feel, however, that we must express grave concern at measures which discriminate against local authority building without taking steps to control building as a whole.

This is not the first time that building has been found to be an easy victim when economy is in the air. Indeed, the industry has a sorry history of the tap being turned on and off, of shortages and cuts. Now, with all controls removed and the market unsatisfied, things are largely out of hand, and in many parts of the country architects and technicians are just as lacking as materials and building labour. What the industry needs above all is a study, ordered programme of work which, in volume, need not be less than at present. This can be achieved only by a measure of positive control based on priorities—and few will deny that housing should have a higher priority than some of the building now in hand, which is of a relatively unnecessary and luxury nature.

Interest rates to local authorities are higher now than for a quarter of a century and this is the most important factor in present housing costs. In spite of the Minister's contention that it should be possible for local authorities to maintain their housing programmes by increasing their rents from existing dwellings and so adding to their revenue, amongst



Tretol Competition: Lt. Cdr. J. A. Longford-Holt, M.P., presenting a cheque to the winners, R. Towning Hill & Partners (R. Towning Hill, A.R.I.B.A., A.A.Dipl., Lucas Mellinger, A.R.I.B.A., A.M.T.P.I., & Michael Hitchings) in association with Mr. Frederick Mark.
We regret that in last week's issue it was stated that Mr. Mellinger was the sole qualified member of the partnership.

those directly involved with housing finance, we have found few willing to accept his point of view.

The official statement, that in five years the need for a large housing programme—except for slum clearance—will have disappeared, seems out of touch with reality, when in many areas the prospects of those on the waiting lists have never been more bleak. A more realistic view is taken in the recent *Times* leader (November 9, 1955) which says that the local authorities' slum clearance programme, "is not in fact impressive. It amounts to the scrapping of only 75,000 worn-out dwellings a year and the building of some 80,000 new ones to rehouse the displaced families. This amounts to renewing only one-half per cent. of the national housing stock annually—the renewal rate should be three or four times larger." The programme seems, too, to disregard the needs of most of the young married couples now without a home—referred to in the Census only as "family nuclei".

It has been argued that national finances would be given some immediate relief by the elimination of subsidies. But the elimination of the subsidy for general housing needs will save less than a farthing in the pound in the Budget in the first full year of operation and cannot be said to be in any sense a decisive, or even important, factor in solving our economic difficulties.

The Government hope that the present rate of house building will be maintained, or that at any rate it will not drop below 300,000 houses a year, but less building by local authorities can only mean that more is expected from the speculative builder. This prospect must cause concern, not only to architects, but to all who fear the accentuation of the sprawl of our cities and the planning problems of the future. The speculative builder too is affected by dear money; he must build to sell and the tendency

will be towards even more shoddy building on cheaper, more distant sites.

There can be no doubt that housing by local authorities and by public bodies, as in the New Towns, gives the greatest possibilities for planned development. In the long run such schemes will prove very real assets to the nation, and will justify the expenditure by the State.

The Bill provides for the retention of Exchequer subsidies on dwellings for slum clearance and for dwellings in New Towns and expanded towns to relieve congestion in the crowded centres. But such a narrow limitation of the type of dwelling eligible for subsidy will nullify the advances made under the Town Planning Acts in the direction of planned redevelopment of old and obsolete areas.

Since the war it has been officially recognized that the redevelopment of obsolete area involves zoning the parts suitable for housing, industry, etc., and the preparation of overall plans for improving the road pattern and so forth. In housing areas provision of sites for open spaces and new schools are as important as the standards of the housing itself. Such measures have been included in the appropriate Development Plans and we can say that local authorities now know that any families displaced through redevelopment could at least be provided with a new dwelling which would attract a subsidy, whether the dwelling demolished was a slum or not. Under the new Bill, on the other hand, subsidies will be limited to dwellings for those living in slum clearance areas. The only provision for development on a larger scale than that of individual cleared sites is a so-called "Redevelopment Plan" under a little-used and limited provision of the 1936 Housing Act, under which it may be possible to redevelop as a whole an area now peppered with slums.

Unless the provisions in the Bill are extended, so that all families displaced

by development can be provided with a dwelling eligible for subsidy, there will be no alternative to piecemeal slum clearance in isolated blocks wherever sites become available. Local authorities will become more and more reluctant to develop sites without subsidy, although their development may be essential to the proper planning of the area as a whole, and even though by so doing congestion can be relieved elsewhere. Planners in particular are aware of the inadequacies of piecemeal development of cities as it was practised at its worst in the 1930s, and of how often housing blocks are found to be in the wrong position, making future development more difficult and more costly.

Subsidies for other dwellings to relieve congestion in cities are limited to housing outside the boundaries, in expanded towns, new towns or similar "reception areas". The provisions of the Bill should be amended to include assistance for large schemes in those parts of cities which are not at present slum areas but which are ripe for redevelopment.

The A.B.T. considers, therefore, that the new proposals on subsidies are ill-conceived. We call for positive measures of control of building, in the interests of the community as well as the industry itself. The Bill should be amended to ensure that large housing projects can proceed in all parts of our cities which are suitable for development. Unless such measures are taken it is likely that in five years planned reconstruction in obsolete areas will degenerate into haphazard and inadequate building.

COMING EVENTS

Royal College of Art

November 28 at 5 p.m. The fifth lecture by the Lethaby Professor of Architecture, Professor Basil Ward, F.R.I.B.A., Hon. A.R.C.A., on "W. R. Lethaby and his Times". At the Victoria and Albert Museum, Lecture Theatre.

Royal Institute of British Architects

November 28 at 6 p.m. Meeting of the Library Group. Frank Scarlett, F.R.I.B.A., will introduce an evening on "The Architecture of Islam with special reference to Egypt." At 66 Portland Place, W.1.

The Royal Institution of Chartered Surveyors

November 28 at 6 p.m. General Meeting. R. F. S. Body, Barrister-at-Law, M.P., will give an Address on "The Building Surveyor and the Law." At 12 Great George Street, S.W.1.

The Architectural Association

November 30 at 8 p.m. Ordinary General Meeting. "Architectural Memories 1905-1955," by H. S. Goodhart-Rendel.



Ground floor of Grand Hall showing T.D.A. stand on left designed by Alan Roscoe-Hudson and Alistair G. Smith, and Crittall's stand designed by Neville Conder. On the right, Ruberoid's stand designed by Eric Brown.

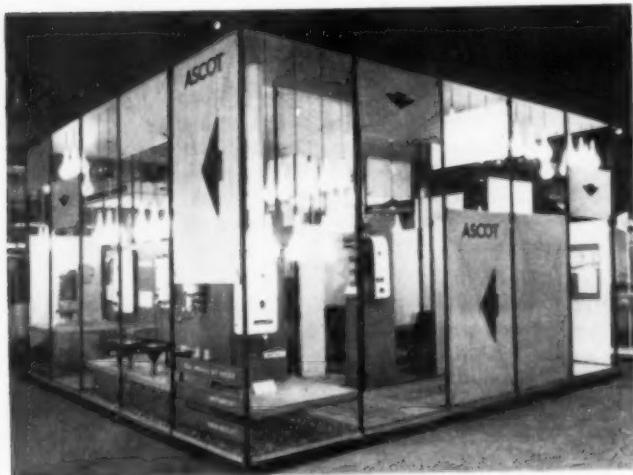


Left, Ground floor, Grand Hall. Pyrok stand on left and Celotex on right. Right, general view of official stands in the gallery of the Grand Hall.



Views of the Building Exhibition

The Ascot stand, No. 272N, on the Ground floor of National Hall, was the result of a competition won by Dennis E. Pugh. David Jenkin describes it as "charming to look at" in his review of the exhibition on another page.



The stand of Lafarge Aluminous Cement Company Ltd.
by Ronald Dickens, M.B.E.

A special display in the National Hall Gallery features Timber as a building material. The picture shows part of the stand of the British Columbia Lumber Manufacturers' Association which introduces the display, and Nigeria, one of the overseas stands which support the theme.



Impressions of the Building Exhibition

by DAVID JENKIN, B.A., F.R.I.B.A., A.M.T.P.I.

HOW does one go around the Building Exhibition? Do you do it systematically, and painfully, working from stand number one to what seems like a thousand? Or do you, in butterfly fashion, flit from old friend to old friend first, sipping the nectar of new invention—or more probably sherry—and at the end whisk around the etceteras? Whatever your method, there is a lot to see, and a great deal of it is really interesting stuff, displayed for the most part, I thought, more clearly and attractively than we have been accustomed to previously.

I got the impression that stand design is again better this year. It seems to have been improving steadily each year, and the ideas behind the simpler and better designed stands of a few years ago have spread. Perhaps it is also because more good architects are employed. Even so, there are still too many bad ones.

There is still room for improvement, even among the better stands, and even in Millionaires' Row, in the middle of the Grand Hall, where the money-is-no-object stands tower up, jostling with each other in the real spirit of competition behind the enterprise. While this is all good fun, it might have been even more fun if there had been more give and take, and consultation with the neighbours when designing. Perhaps this is done, but if it is, I feel it could be taken further with advantage to all concerned.

I went around the Exhibition on the day it opened, and asked people what they had new since last time, two years ago. Practically everyone had something, but in most cases it involved chiefly a refinement on something already known about. But while, at the end of my tour I had the impression that this was not an Exhibition

which would be remembered for dramatic innovations, I did feel that it represented a step forward in the development of building products. It showed that there is a good deal of vitality and ingenious thinking in the industry which is a healthy sign.

Now for the products, just some of the innovations.

FURAL, introduced last time by S. W. Ronald & Co., can now be supplied in two gauges, 22 and 24, and in copper. You will remember that this sheet metal roofing is rolled on to the roof structure on the zip fastener principle. In addition, the aluminium can be stove enamelled in rich colours for use as wall-cladding, or even as a very deep fascia say over a shop front.

Imperial Chemical Industries have produced KYNALOK, a secret-fix cladding using an aluminium alloy sheeting. It is in ribbed form, and is sold complete with inner lining. It is fixed by the Licensee as a complete curtain wall system, and has a "U" value better than an 11 in cavity brick wall. The version of this for roofing is KYNAL.

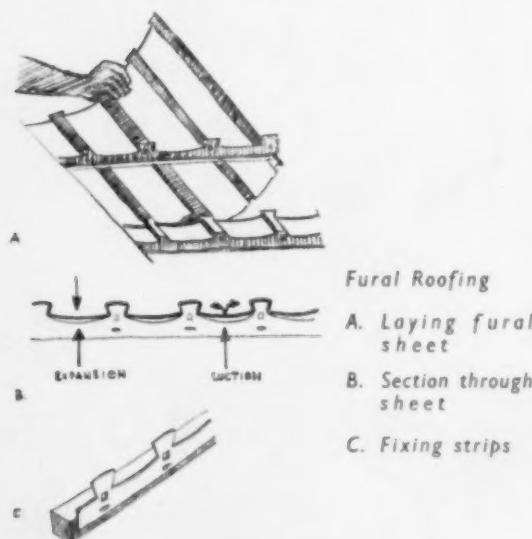
NURALITE, which has been previously marketed as an alternative to the more traditional metal flashing materials, is now developed as a roofing material for sloping surfaces, with a twenty year guarantee. The colour shown on the stand is the natural black finish of this thermo-plastic material.

Following the trend using mineral surfaced bituminous felt on pitched roofing, Briggs introduce a two-layer felt roof of this type with overlapping joints roughly every eight inches horizontally, for those who want the effect it produces.

After two years, H. Newsum Sons & Co. have done two hundred contracts covering a million square feet on all kinds of building types with TROFDEK, their pre-fabricated timber structural roof. The units are built up, you will remember, in the form of troughs formed by timber battens with plywood webs. Spans can now be erected up to forty-one feet clear, as demonstrated by the roof of the stand.

Gutters. For years I have looked at Finlock gutters and have thought it a good idea, but then, look at that ogee! And that has been the end of it. In order to bring these precast concrete gutters more into conformity with current ideas some much more acceptable profiles have been added. One is simple cornice, two are square fascia types 5 in and 3½ in deep, and another has a sloping fascia. Six months ago a new lining was introduced consisting of a heavy coat of hot bitumen, then aluminium foil, and a further coat of hot bitumen. The guttering has a twenty year guarantee.

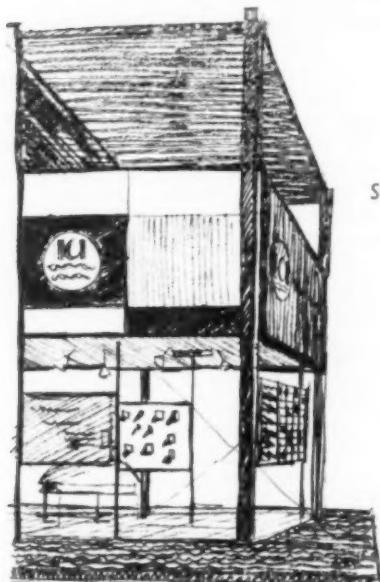
On the stand of Concrete Ltd. there is a new system of Bison frame construction using precast columns, beams and floors in a composite construction. It is designed for speed of erection, cheapness—cheaper than steel at the moment—and is backed up by the most up-to-date mechanical equipment, declare the salesmen, all



erected by Concrete Ltd., from six factory centres spread throughout Great Britain.

Penfold's prestressed fencing posts, sold at the price of ordinary reinforced ones, have the following advantages claimed for them. They are two-and-a-half times the strength of ordinary posts, more resistant to the weather, are in less danger of fracturing while in transit to the site, and are less liable to spalling through the rusting of bars too near the surface.

While on concrete products, there are several exhibits showing surface treatments, and among the more successful I noticed were exposed aggregate slabs by John Ellis & Sons, by the Cotswold Dale Stone Co., and by the Cement Marketing Board, who also showed some embossed concrete surfacing. The British Rubber Development Board had some examples of embossed surfacing by using rubber sheets of various forms, the sheets being on show as well.



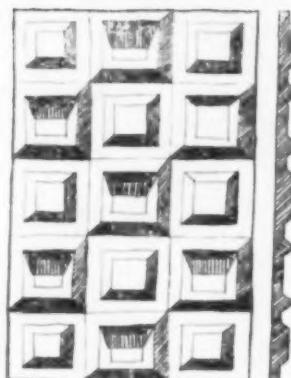
Stand for I.C.I.

The London Brick Co.'s stand represents part of a framed building and shows how brickwork can be used as cladding. To avoid misunderstanding on the natural strength of bricks, they have brought along a compression testing machine with which they are also doing some demonstrations on the "frog up or down" argument going on at the moment. Unless you know about them you may overlook the small examples of prestressed brick lintels. This is a development of reinforced brickwork. Since the wires can be painted, because there is no need for a bond between them and the brickwork as in ordinary reinforced brickwork, the danger of corrosion can be eliminated. They would like architects to go and comment on the idea.

Brick stands have tended in the past to be ponderous. It is a subject that has been so much worked over that anything fresh is hard to find. Sussex & Dorking United Brick Companies' stand has a lighter touch than is usually found in brick, and Lanchester & Lodge are to

Concrete cladding with embossed pattern.

Cement
Marketing Co.,
Ltd.



be congratulated on this achievement, as are Stillman & Eastwick-Field for their Eastwoods stand, where the convincing effect is obtained by quite another approach. The sculptural decoration using a model of the crystal structure of a constituent of portland cement I thought most entertaining, but I wished the lane were wider so that I could see it properly.

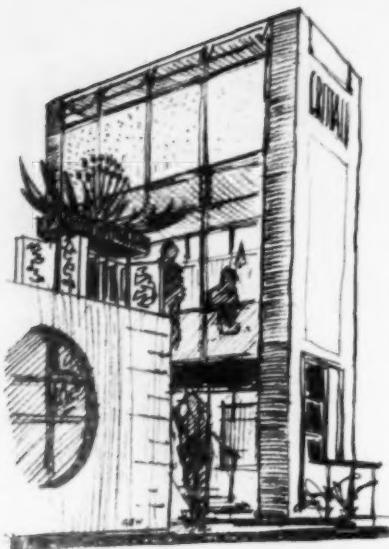
Another stand where the product makes the stand is Carter's tiles. The stand sets out to demonstrate that "tiles are good neighbours", that they can be used well in association with other finishing materials. Gordon Cullen has produced some delightful touches on this stand. I was especially delighted with the decorative lettering. You should make a point of seeing this.

Nearby we see what happens when East meets West. The central feature of Neville Conder's stand for the Crittall Manufacturing Co. is one of the windows now being supplied to the Royal Palace in Bagdad. This stand, making use of FENESTRA wall cladding, and also intriguing lettering patterning, together with other features, is a stand with a difference, and well worth a visit for its own sake. Crittall's had a new double-hung aluminium sash window, completely weatherstripped. Usually I find that weatherstripping a sliding door or window results in stiffness through friction, but I found this window remarkably easy on the fingers.

When you pass the John Thompson Beacon Windows stand don't forget to call in for a chat with the real live, brightly coloured Polparrot. If he leaves your ears burning too much, look at the double-glazed window

Mural by Carters.
Black figure on
beige background.





Crittall's stand.

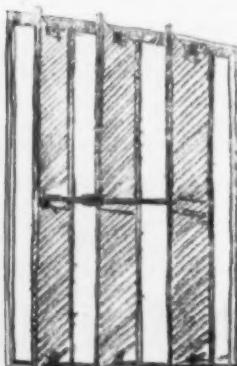
Impressions of the Building Exhibition

which can be opened for ventilation while a veritable tropical rainstorm bursts upon it.

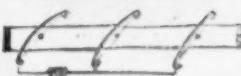
Three days before the Exhibition opened Henry Hope & Sons brought out a means of introducing double glazing into standard metal windows. The unit comes completely sealed in a metal channel, with Insulight or Plyglass. They had no prices when I was there, but expected it to be quite cheap, relatively speaking.

One frequent complaint levelled against metal window furniture is that nothing seems to have been done about it since before the war. Williams & Williams would like architects to visit their stand and comment on the new range of designs, some of which appeared to me to be both smart and ingenious. While there note, among the many items, the new form of patent glazing for side walls, which is basically a refinement on patent roof glazing.

Of the wooden windows the two which I noticed particularly were the CARD A windows which have come down in price, and TOMO windows, on the Stramit stand. As with the Carda, Tomo windows can be had in single or



Hope's
Vertical
Sunbreaker.



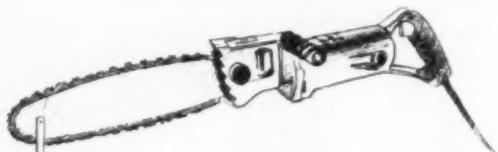
double glazing. They can be hung with vertical or horizontal pivots, and are made to the architect's requirements.

Pilkington's showed me MUROGLASS, an answer to colour in curtain walling. The colour is a vitreous enamel fused on during manufacture. They have seven basic colours and claim that they are permanent. Downstairs there is a large model of the Soho project which has been in the architectural press so much recently. Whether you like the style of musical and spoken background is, I suppose, a personal matter. So I will leave it at that.

Chance Bros. are concentrating on coloured glass, and show all kinds of variants, deep reds, blues, greens, streaky, and so on. There are some interesting applications designed by students of the Royal College of Art.

Fibreglass for heat insulation is well known. Developing their work in this direction they have now produced a ceiling board specially suitable for industrial buildings. The nature of the surface makes it also an acoustic tile in its own right with a 0.80 noise reduction factor over a range of 200 to 2000 c.p.s. Its "k" value is 0.25 at normal temperatures, it has Class 1 fire resistance, and will not buckle or sag in humid conditions. What more could you want?

There have been developments in glass fibre as a reinforcing element in translucent plastic sheeting, and, apart from Fibreglass, Cascelliod show CASCELLITE



Tarpen chain saw.

corrugated and reeded sheeting. Ashdowns have UNDULITE, originally introduced as an inexpensive roofing light for industrial and farm buildings. Following American lead, it has now been developed as a decorative material, and can produce some delightful effects.

Vermiculite's properties are well known in the fields of thermal insulation, fire protection, anti-condensation, and sound absorption. It is represented by Pyrok, Dohm, and Milsom's Patent Precast (Vermiculite) Cladding.

MURILITE, on Cafferata & Co.'s stand, is ordinary plaster mixed with Perlite, an expanded volcanic "glass" which comes in this case from Sardinia. Apart from the fact that it has the advantages of being only a third the weight of ordinary plaster, has thermal insulation "k" value 1.1 as against 4.5 for sanded plaster, they point out that it is less liable to crack because it is slightly flexible, and has anti-condensation properties due to its high thermal insulation and because it is slightly absorbtent.

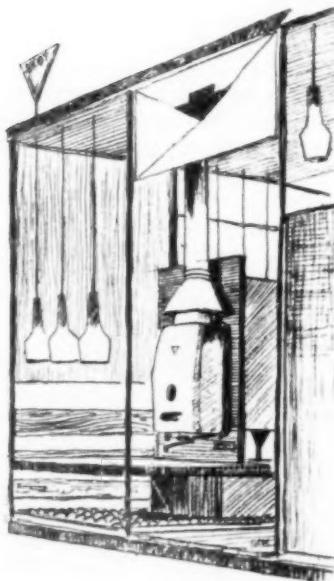
One of the illogicalities of Bellrock has now been ironed out. The wet vertical joint has been replaced by



*British
Plasterboard
stand.*

a dry one on the principle of the tongue and groove. This is a logical move towards dry construction. The stall has examples of Bellrock used as a load-bearing material suitable for use in two-storey house construction. For external wall purposes the cavity is filled with foamed gypsum, and the surface is formed of waterproofed gypsum and keyed to take an external finish. One of these finishes is MINERALITE made of coloured cement and glass aggregate. If you have not seen it before, have a look.

British Plaster Board use their stand to demonstrate the uses of their Paramount dry partition as an inner leaf to curtain-walling systems. They claim that by this they can save 60% to 80% on fuel, and back this up by an experiment with dials for the technically minded. In



Ascot stand.

the gallery of the Empire Hall is a full-size bungalow featuring various materials including the firm's products.

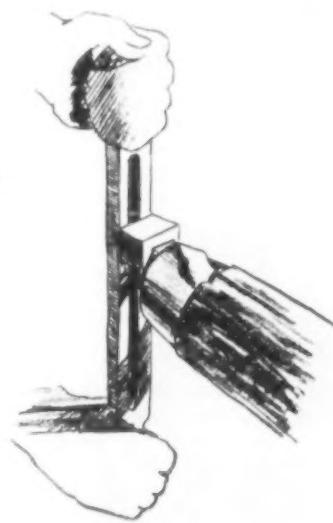
Stramit Boards are now available in self decorative finishes when used as internal partitions, the colours of which are enhanced on the stand by two charming girls dressed to match. A secret jacking device, within the thickness of the board, enables Stramit to be used as a demountable office partition.

The ceiling of the Celotex stand is formed of a new type of secret-fixing system enabling the whole ceiling to be fixed from below.

The Cape Asbestos Co. features the use of ASBESTOLUX as a fire protection, with copious illustrations, sections, and the floor cut away and replaced by 1in thick glass to show its construction. A recent test made with ASBESTOLUX and ROCKSIL gave a fire protection of four hours.

To counteract the usual objection to the grey colour of asbestos-cement goods—which I do not always share myself—the firm some years ago brought out matt colours. They have now added to the range in a coloured glazed finish. Make a point of seeing the floor of this stand which consists of clear glass over illuminated rock plants.

*Cutting Joint
on
fibre drainpipe.*



No car owner need ever have the ordinary double doors again, with all the overhead opening doors on show. I saw them on the stands of Acrow, Westland Engineers, Ellard, and Bolton Gate Co. If you do retain the double doors, you can have a remote control system fitted by the Bolton Gate Co. which open automatically as your car approaches the garage.

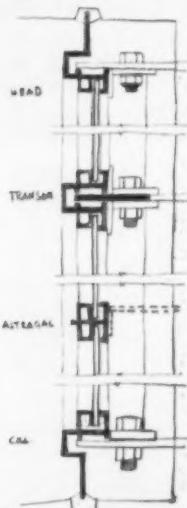
There was a different type of vertical lifting and folding door on the Esavian stand. This has been specially designed for fire stations and ambulance stations, but can, of course, be used for industrial purposes. There are no tracks in the floor, and there is nothing to stick or bind.

The Econa Modern Products stand is always inter-

Impressions of the Building Exhibition

esting. This year they introduce smart radiators in copper tube, and towel rails on similar principle. The idea of skirting heating has been developed in the form of coved shaped skirting and cornice heating. Even the architrave of a door can by this means be turned into a heat source, provided the architrave is of the special shaped pipe supplied by this firm.

The PANELAIRE radiator, by Steel Radiators, combines convected and radiant heat, with a front flat surface. Their other radiators, which are well known, are on show. They can be made to order to indefinite lengths, only limited by problems of handling, which is about 22ft.



Hope's window grid.

Aidas Electric features a diagram of a hot water system in a block of flats, showing how simple the system can become when you use SADIAS. Students especially would find the bubble glass running along the flow and return instructive as well as intriguing.

The ASCOT 715 Balanced Flue Multi-point Gas Heater compensates for the direction of the wind and eliminates back draught. It is much neater than earlier designs, as the old-fashioned flue disappears. The stand is truly charming to look at, and was the result of a competition, won by Mr. Dennis Pugh. What an argument for more competitions for this kind of thing!

Allied Ironfounders have a large stand in the Empire Hall Gallery, showing a considerable variety of examples in space-heating, water-heating, and cooking appliances, as well as luxury and cheap baths.

Greenwood's and Airvac Ventilating Co. have a wide range of high quality ventilating equipment from large fan units to larder lights.

The NIGHTSTOR heater, on the General Electric Co.'s stand, consumes electricity at "off-peak" periods, when

it is cheap, and converts it into heat which is given off during the day.

Various forms of plastic flooring are shown by The Armstrong Cork Co., and Semtex Ltd.

You may think you have had too many sherries when you see the two men on the Michael Laird & Co.'s stand, standing on the wall of vinyl tiles, in the Grand Gallery.

The wood dome at Rangoon University, in the form of an ellipse, 165ft by 85ft, has been structurally covered by a self-stiffening membrane of five-layer laminated teak, three inches thick. Look at the model on the Timber Development Association stand. The stand, too, is a clever piece of construction using thin ply-wood box beams cantilevered from a very thin spine beam of similar construction.

When you feel like a break from stand prowling, there are several other attractions to choose from.

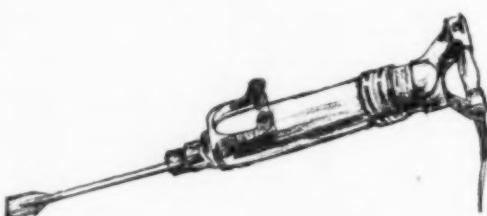
You can go to the D.S.I.R. Cinema in the Grand Hall Gallery, where you will find plenty of other foot-sore visitors.

Alternatively, you can study, in the quieter atmosphere of the government stands, the exhibits of the Ministry of Housing and Local Government, Department of Scientific and Industrial Research, or the Ministry of Works, all well worth a leisurely visit.

Perhaps you went in for the Tretol competition for "The House for the Professional Man". Whether you did or not, the winning design has some interesting ideas, and you can decide if you agree with the assessor.

You may be able to get a front seat for one of the sessions in the Craftwork Competitions for Building Apprentices. It is always pleasant to watch someone else work—but this time, fellow architects, remember that these young gentlemen you are watching will some day be responsible for carrying out your cherished ideas.

The chief diversion, if so important and interesting a topic can be called a diversion, is the special exhibition with the theme "Timber as a Modern Building Material", with stands representing the Gold Coast, Nigeria, France, North Borneo, Canada, and the United Kingdom. It was nearing the close of the Exhibition for the day when I reached this part, and I was sorry not to have come sooner, but I did manage a quick look around. As I left, the fragrance of the wood was fresh in the nostrils, and my chief memory, along with some impressive carved figures, was of a sensation we so rarely get, wood in abundance.



Kango Electric Hammer type E.

Sketches in this article by George West.

Official Stands and Some Cladding Exhibits

by DENZIL NIELD, A.R.I.B.A.

ARCHITECTS and builders from the country or from the provinces, who have no access to showrooms, probably have special stands to see, where they can choose fittings or see ranges of tiles, finishes, etc., which cannot be done at long range. They finish off with a general tour.

London architects make the general tour their main object, so that they can see new developments and new materials, wider ranges of materials which they can refer to at London showrooms or at the Building Centre when they are needed.

These notes deal more particularly with the new materials and new developments which may be of general interest.

Official Stands

The special display, "Timber as Building Material" is probably of most interest to architects. After years of contemplating raw concrete it is very good to see so much timber displayed—not only for structural purposes, but for finishes. The Federated Home Timber Associations stand 530-532/NG will be a pleasant surprise to some. They show home-grown softwoods and hardwoods which can be used for decorative purposes. Some of these are very pleasing and have a grain and colour which is a refreshing change from some of the imported hardwoods. Among those shown are pear, cedar, yew, hornbeam, elm, wych elm, figured brown oak and Sequoia Gigantia—this last can be made into rot-proof shingles. Elm flooring is shown, treated with Bourne seal. The effect is very interesting—full of character. There should be no special difficulty in getting these timbers kiln dried for joinery.

The softwoods such as larch and Scotch pine compare in price with imported softwoods for structural purposes and of course they can be graded. All these should be readily available in England, though the small timber yards might have some difficulty in getting them. The Association is formed for the purpose of helping architects and buildings to find the particular timber they want.

The Canadian Government is bidding to compete with North Europe for our timber trade and on their stand 534-535/NG they feature hemlock, douglas fir, spruce, western red cedar, Canadian red pine, etc. Some of these, such as hemlock, can be obtained in large sizes, useful for spans wider than normal—joists 15in deep being quite feasible.

On the D.S.I.R. stand 446 etc./GG can be seen the Standard Colour Range which has been produced by the paint industry and B.R.S. in conjunction with the R.I.B.A. and is embodied now in B.S. 2660. The range is related to the Munsell system.

D.S.I.R. also show P.F.A. bricks, the use of P.F.A. aggregate, which they suggest can replace furnace clinker, which may become in short supply.

On the stand of the Ministry of Housing and Local Government 453-455/GG they show some very well

designed residential development—flats and small houses—from all over the country. A special feature shows in detail crosswall construction for houses and maisonettes, a very logical and economical system.

The Ministry of Works stand 445, 447, 449/GG shows some of their work to encourage the use of mechanical plant and power handtools to increase speed and productivity in building.

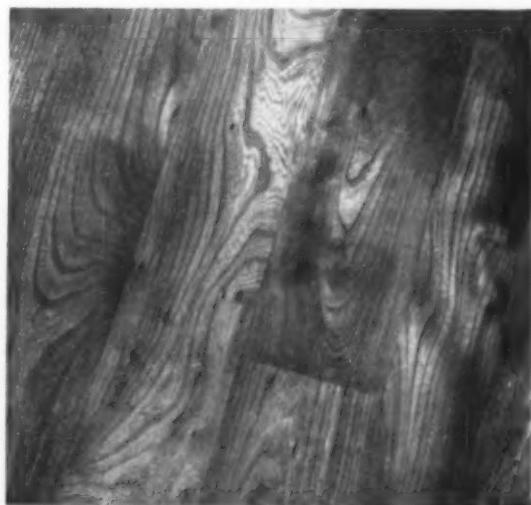
While at the Exhibition it is worth paying a visit to the stand of the Fire Prevention Association 407/GG. Here free brochures are given away, giving advice on fire precautions for small houses, conversions to houses, special cases like country houses. Some of this information is quite apart from general bye-law requirements and deals with matters which are very important but quite overlooked by many who imagine that once the bye-laws have been complied with their responsibility ends. These pamphlets are not normally obtainable through stationers or the Stationery Office, so they should be collected here.

Curtain Walls

Many systems have now come out and it is possible to compare them. The chief difference is probably in material, some relying on steel for support, usually a flat bar vertical member, with or without aluminium casing, others having wholly aluminium structural members. The users of the steel members claim extra strength and greater fire resistance, though the aluminium bar appears to satisfy most requirements. The all aluminium constructions are neater usually.

One all aluminium system is "Walspan" of Williams & Williams Ltd., 83 D/G. this is a thin box section with a clean profile. Small improvements have been made since the original design came out.

Federated Home Timber Association's Elm Flooring.



Official Stands and Some Cladding Exhibits

Another all aluminium bar is used by Quicktho (1928) Ltd., 612/EG in their "Windowwall". This has three webs, the centre structural, the others as casing but all in one extension. Better intersections can be made, it is claimed, between sill and mullion to prevent water penetrating the top corner of the panel.

Messrs. Frederick Braby & Co. Ltd., 185 H/G also use aluminium only, but their system is basically different; panels and windows are made up with an aluminium channel surround. These surrounds fit together by means of rebates to form box mullions. This gives a very clean and neat finish, but it may be difficult to allow for tolerance. This system is called "Wallstruct."

Messrs. John Thompson Beacon Windows Ltd., 298 P/N, make "Wallclad" which is a rust-proofed steel bar with steps, similar to the universal section mullion.

Messrs. Henry Hope & Sons Ltd., 90-91 D/G use a steel flat in their "Window-grid". This flat is hot-dip galvanised 15ft lengths being possible.

The "Fenestra Wall" of Messrs. Crittall Manufacturing Co. Ltd., 98 E/G, is supported also on a steel bar but aluminium extensions case it externally and, if required, internally, and windows or panels fit into the extensions.

Messrs. John Williams & Sons (Cardiff), Ltd., 281 O/N, have produced a curtain walling which also has steel with aluminium casing, the casing being a U-shaped member.

Wall Panels and Sheeting

Many lightweight wall panels and composite sheets are developing for use with curtain walls, or for partitioning, or designed to take light loads for use in one or two storey buildings.

Asbestolux sheets made of asbestos, not asbestos cement, are shown by the Cape Asbestos Co. Ltd., 42 C/G, faced with a variety of materials, vitreous enamelled steel sheet, ply glass, aluminium sheet, and Mineralite rendering. Backed with some form of insulation good cladding panels can be made which are fire resistant to varying degrees and unlikely to be affected by moisture.

As backing material to a facing like glass plaster panels are cheap and easy to fix. Messrs. British Plaster Board (Mfg.) Ltd., 94 E/G, show their Para-

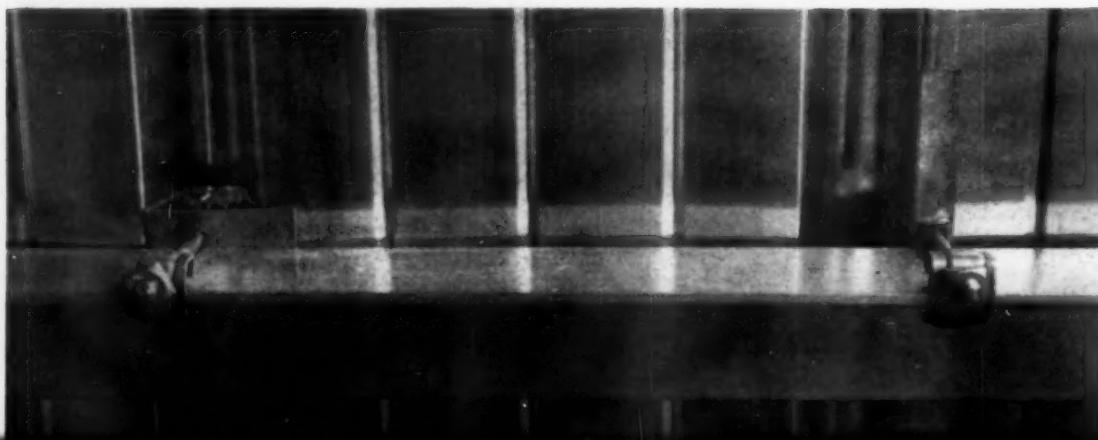
mount dry partitioning panel used in this way in a "Wallspan" type framing.

The hollow plaster slabs can be obtained faced with aluminium foil, which is an effective vapour barrier against condensation and should act quite satisfactorily when the panels are pointed with plaster. This firm also shows ordinary plasterboard sheets fixed to brick walls with plaster dabs, thus cutting out the normal timber strapping. This would seem to be a much better way of fixing sheeting material, provided the operatives can develop the technique, which should not be very difficult.

Of the metal sheetings for fixing to rails the latest newcomer is produced by the Northern Aluminium Co. Ltd., 639/EG, the "Snaprib". The main feature here is that jointing of the sheets is over a rib at the edge of the sheet, with fixing by a concealed clip to the purlins or rails behind. The sheet is not pierced with any bolt. This gives a more pleasant appearance. Eaves filler pieces are available, but barge boards and other trimming features, as with many of these sheetings, tend to look rather cumbersome. The aluminium can be left with a bright finish or "alocromed" or "poluminised." These finishes are duller and may be preferable, particularly for large areas. The "Snaprib" sheet is of course only the external finish and the problem of condensation has to be coped with separately, either



Northern Aluminium Co.'s "Snaprib" sheeting.
Purlin fixing in view below.



draining the space behind the sheet or by using a vapour barrier on whatever internal lining is used.

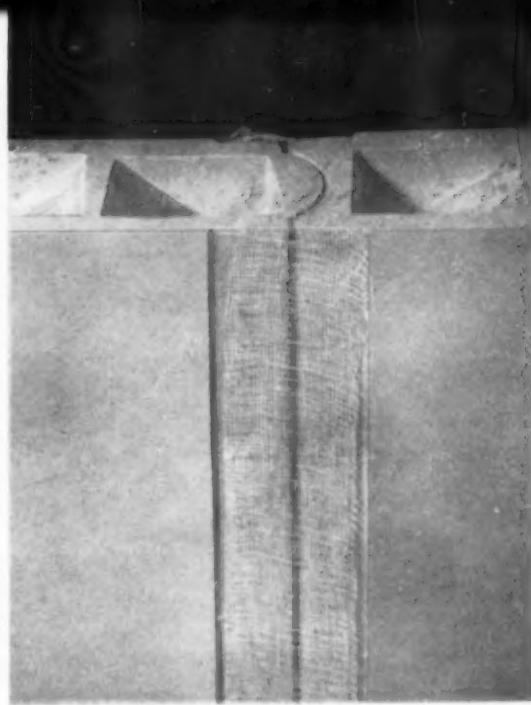
The "Kynalok" sheet produced by I.C.I. Metals Division, 86-87 D/G, appeared last building exhibition. The fixing is concealed in the cornerstrip which matches a corrugation. This fixing can also take the aluminium channel for a fibreboard lining. In practice no condensation troubles have been encountered, probably because of the amount of ventilation between the large corrugations. This firm makes concealed filler pieces of P.V.C.; they are cheaper.

Since the last Building Exhibition, when Fural was first shown, Messrs. S. W. Ronald & Co. (London) Ltd., 423/GG, this material has been used on many jobs successfully. Recent developments are a wider sheet, 58in, which can be made from a thinner gauge and is quite suitable for vertical cladding. The width of the sheet would in fact span between window cill and the head of the window below in many cases. Or their stand they show its adaptability for use on curved walls such as tank rooms on roofs and also for curved roofs, presumably fixed to purlins on to Belfast type trusses or curved lattice system like "Lamella." Several new finishes are shown, such as stove-enamelled sheeting, and also a finish like a clear lacquer, which is called "Eppicoat" resin finish, which is said to be highly-resistant to chemicals. In Switzerland Fural is much used on roofs and, to prevent snow sliding off, small projections called snow dimples are formed in separate strips, which are fixed in the corrugations. These could be used to give an all over pattern, which would add interest to a large area such as a gable wall.

Bellrock plaster wall sections, Bellrock Gypsum Industries Ltd., 229 K/G, used to be jointed by running liquid plaster into the joint cavities. They have now improved this joint by making it tongued and grooved, a dry process. This company have developed this slab very much for use as an external cladding or backing to external cladding. It has very good insulation value; in fact if filled with foamed gypsum as used in Canada the "U" value is less than .1. They claim that their exterior panels are waterproof. They are produced by using an emulsion which is mixed with the gypsum and are available with a key for rendering or with horizontal ridges, again in which can be bedded briquettes 1in thick to give a brick external finish. This may horrify some purists, but undoubtedly a brick finish is a very durable and pleasant exterior and 1in thick briquettes would seem to be logical, and one can presumably develop interesting bonding patterns. Briquettes for this have been made by the Maidenhead Brick & Tile Co. Ltd.

Another development which has been prepared in consultation with the Building Research Station is to provide a hollow trough at the top of the panels in which a perimeter beam can be cast, so that the panels can take a distributed load for which they are quite strong enough, from floors or roofs. This trough is normally concealed by the web at the top of the panel. This web helps to protect the edge from damage and it can be cut off by the fixer just before erection.

Messrs. Pilkington Brothers stand, 133 F/G, has as its main feature the model of the Soho Development which has been much publicised. It is a very interest-



Tongued and grooved Bellrock plaster wall section

ing exhibit. Their most recent development is "Muro-glass," which has been prepared in answer to the demand for a cladding material. It consists of rough-cast, or wired rough cast sheet, with a surface colouring on the back. This colouring is fired into the glass so that it is very durable. Seven colours are available. For purely decorative purposes they have also developed some painted and fired toughened glass panels. The designs are applied by silk screen to the glass and are fired in the toughening process. These are expensive, but they give an effect of very strong character. Pilkingtons show a design in deep sand-blasting on a thick panel of glass where rather a pleasant effect is obtained by leaving small sharp projections, which are later nipped off. This gives a very sparkling effect.

Interest has developed lately in deeply moulded or embossed designs in casting concrete panels, a welcome relief from the monotonous flat, grey, gritty looking facing slabs. The Cement Marketing Company Ltd., 130 F/G, show two very interesting examples.

Windows

A horizontal sliding aluminium window is shown by Messrs. Quicktho (1928) Ltd., 612/EG, the detail is very simple with small section members—also a very wide top hung vent which is only possible because it is supported all along the top by the interlocking of the circular section top member with the frame.

Messrs. Harry Hope & Sons Ltd., show a double glazed unit which can be fixed in opening lights of the domestic standard metal window. A very small aluminium channel is used to hold two thicknesses of 24 oz glass and it is fixed through the web of the sash. For this reason it can only be set in fixed lights where there is an opening light each side.

On the E.J.M.A. stand, 131 F/G, is shown a hori-

Official Stands and Some Cladding Exhibits

zontally pivoted wood sash held with a friction stay. It will open to over 90° so that it can be cleaned from inside, this is at the expense of having the hinge plates fixed on the outside. They are cheaper than casements. The L.C.C. have, I believe, helped the development of this for their flats.

Other Exhibits

The casing of steelwork even to comply with the reduced bye-law requirements is always a problem, involving wet construction, much weight and other troubles. Messrs. Milsom's Patent Precast (Vermiculite) Cladding, 61 C/G, have developed a very economical system for using vermiculite slabs reinforced with wire. The ends of wires are left exposed so that they can be twisted together at the angles to simplify fixing.

Messrs. William Kenyon & Sons (Meta-Mica) Ltd., also show a method of casing steelwork with 2in vermiculite pre-cast slabs by nailing the slabs to blocks set in the flanges, the soffit slab being nailed up to the under edge of the side slabs. The slabs would be bedded in cement mortar and the joints pointed up, but no solid fill is necessary against the beam. If this finish is plastered, a three-hour grade fire resistance is obtained. The block has a smooth finish, so that for

industrial purposes the rendering may not be required. This firm also show an asbestos spray with a colour integral with the asbestos for the finishing skim coat—rather a change from the usual dull grey.

The heat pump interests most people—there is a feeling of getting something for nothing about it. At the last Building Exhibition a prototype heat pump was shown, which cooled the larder and at the same time heated the hot water. Three models of this are now available, one produced by Ferranti, called the "Fridge-Heater" which will cool a larder up to 12 square feet of floor area for a wood floor, or 15 square feet if the floor is finished with tiles or concrete. The cubic content of the larder is not material, as the cold air sinks to the bottom of the room. Reasonably tight-fitting doors are necessary, but no special rebates are required. The whole unit costs about £160 and uses five to six units of electricity per day. The hot water obtained is given as five gallons per hour in the summer months, down to two and a half gallons in the winter. Before installation it is necessary to make heat loss measurements of the larder itself and the room opening from it, so that precise adjustments can be made to suit those conditions. The Ferranti Fridge-Heater has a feature that the control unit can be withdrawn and replaced by the local supplier with a complete new unit. Most of the parts that can go wrong are in this control unit, so that the time one can be without the Fridge-Heater is reduced to the minimum if there should be a breakdown.





Classroom wing, south east facade with side entrance in foreground. Natural, dark grey rendering. Glazing in steel and light metal. Roofing of interlocking dudovice-pan-tiles. The canopy is of steel construction, covered with corrugated Aluman sheets. The soffit is covered with fluted natural treated timber boarding.

KUGELILOO SCHOOL, ZURICH, Switzerland

architect: ERWIN BÜRGI

THE school, which is one of the biggest in Zurich, is situated on the edge of the town.

Only a limited amount of land was available for the project which was first envisaged with half the number of rooms; in the final scheme therefore it has been necessary to have large scale grouping of the accommodation.

The main 3-storey building contains all the classrooms and includes two recreation areas one above the other—both leading directly to the gymnasium. Two stairways make for an easy flow of the 800-odd schoolchildren to 3 exits which lead to the playgrounds. The whole group of buildings stands out clearly and dominates the surroundings which are built over with houses.

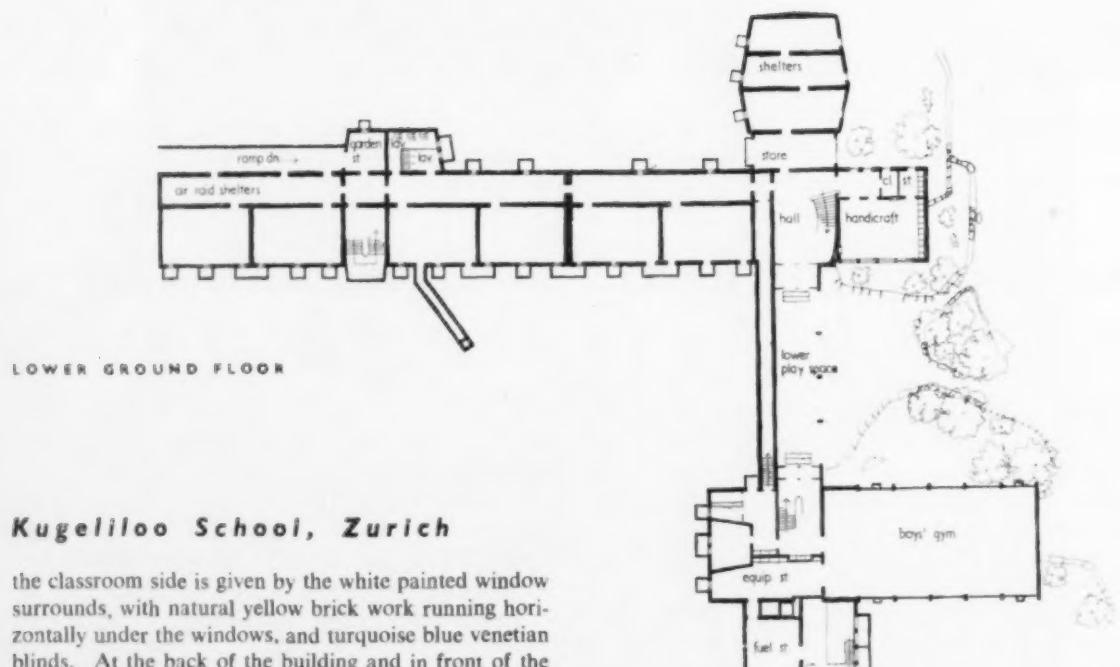
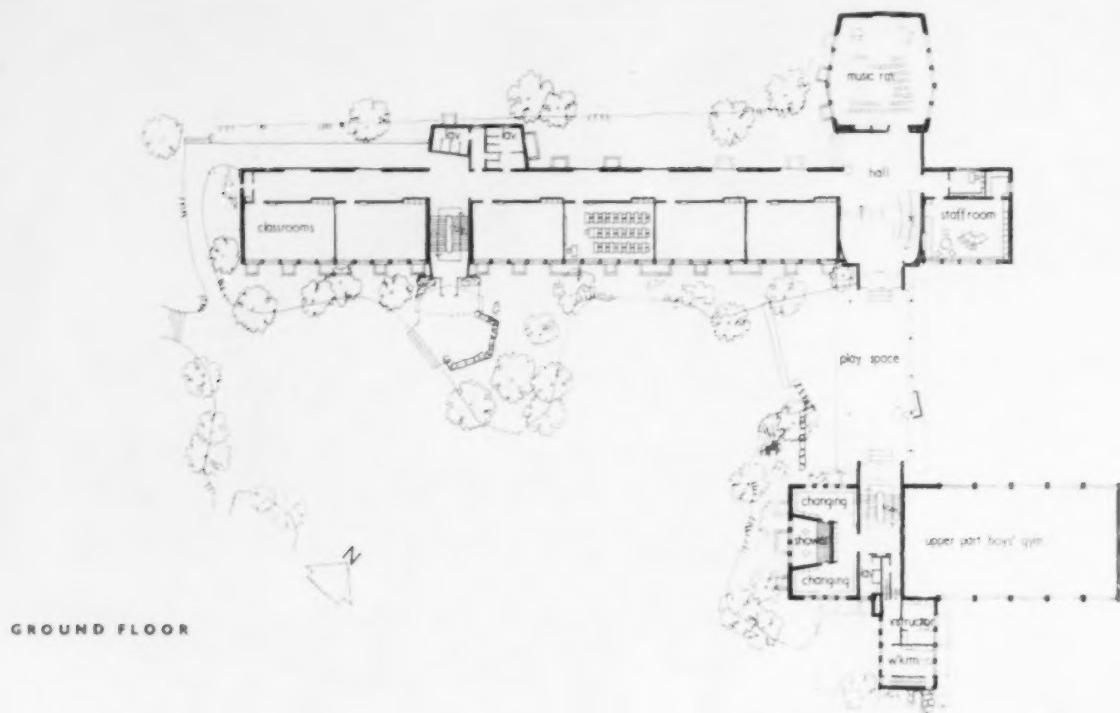
The building construction is reinforced concrete with

walls plastered; the window breastwork on the south side is of natural brick. Walls of natural brick are also used inside the building but only for functional reasons—e.g. against damp in the cloakroom, and against wear and tear at each end of the gym.

Attention has been given to surfaces subject to the greatest wear and tear. Thus, rough hewn Tessin granite and Bundner Quarzit are used on floors; hard concrete on the hall floor and stairs; inlaid lino on the doors; and wall surfaces are finished naturally so that they can be washed down easily.

To absorb sound, all corridor ceilings, together with those of the singing hall, main staircase, recreation areas and gym are covered with naturally treated wood and sound board painted in different colours.

A sense of freshness to the outside of the building on

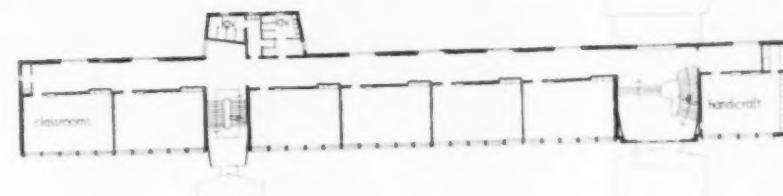


Kugeliloo School, Zurich

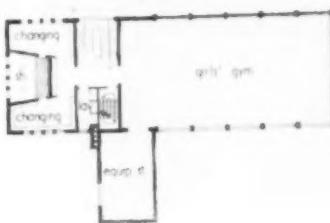
the classroom side is given by the white painted window surrounds, with natural yellow brick work running horizontally under the windows, and turquoise blue venetian blinds. At the back of the building and in front of the gym, the wall surfaces are deep grey relieved by rich blue painted concrete breastwork and window surrounds of white artificial stone.

Inside, the rich colours of the doors, cupboards and walls, together with the brightly coloured pictures on the walls of the staircase, lend a particularly gay note to the whole school.



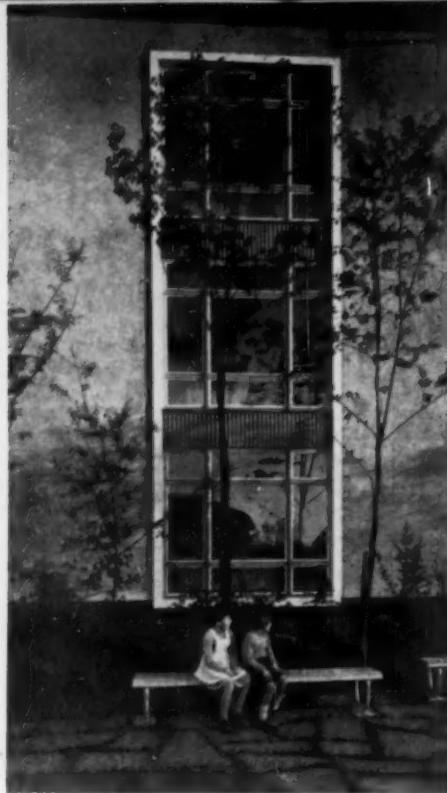


FIRST FLOOR
(Second floor similar)

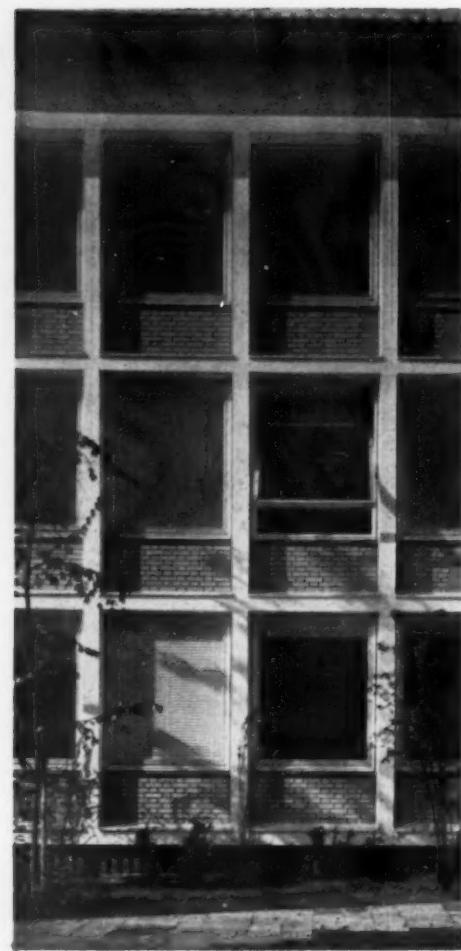


Main staircase.
Floors and
treads, laid
with rough
split natural
stone slabs in
random pattern
(darker Maggia
granit and
lighter Sciara-
quarzit).
Risers, strings
and skirtings
of black con-
crete (Dura-
tex). Round
iron balusters
painted blue;
natural finished
timber hand-
rail, bound
with wrought
iron rings to
prevent sliding.
Walls rendered
in natural grey.

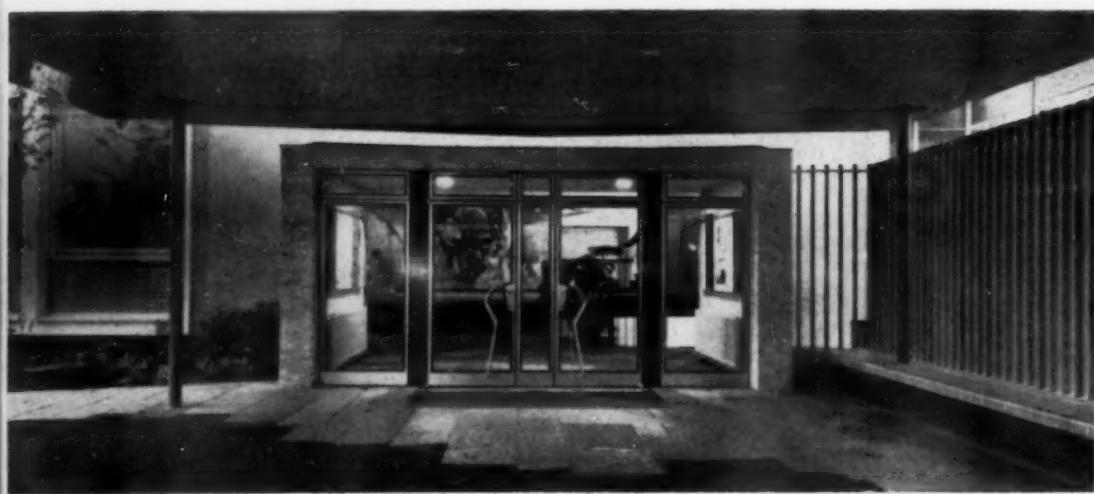




The N.W. facade. Walls grey, natural rendering. Plinth of ribbed concrete painted swedish red. Window surrounds in white artificial stone. Window spandrels are exposed concrete profiled and painted blue.

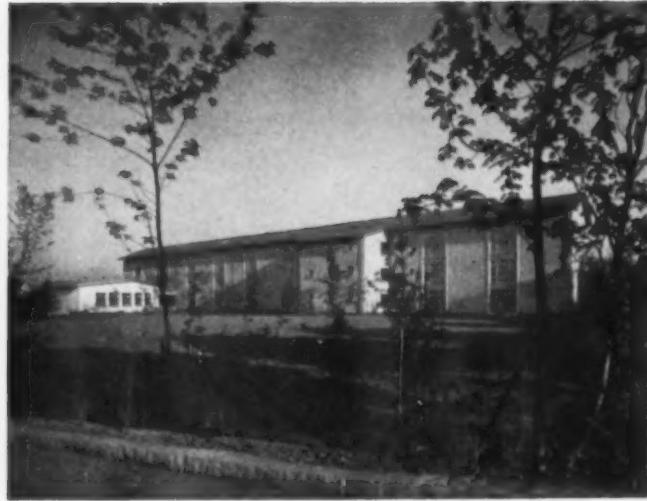


S.E. facade (classroom wing). Exposed concrete frame, painted white. Brickwork spandril panels in yellow facing bricks. Double glazed pivoted windows with fitted venetian blinds in light metal-turquoise blue. Window frames grey-black; casement painted white with metal glazing beads. Dark-grey rendering. Plinth in ribbed concrete painted swedish red. Projecting parts of the window cills and horizontal concrete beams flashed with zinc.





View from side entrance. In the background, gymnasium wing with caretaker's dwelling connected by recreation hall to the classroom wing.



Classroom wing from N.W. choral hall on left. Walls are of dark-grey natural rendering. The choral hall is roofed with white rolled Aluman sheets.

Kugeliloo School, Zurich

Main entrance hall. Paving, rough split natural stone flags (granit and quarzit). Walls, natural colour cement rendering. The polished plate glass window has a coloured glass mosaic cill. The mural depicts old Swiss customs, is by Hans Falk of Zurich. The drinking fountain with bronze seagulls is by Ueli Schoop, Zurich.



LIBRARY NOTES

Modern Office Buildings

By Michael Rosenauer, F.R.I.B.A., A.I.A. Published by B. T. Batsford, Ltd., 4 Fitzhardinge Street, Portman Square, London, W.1. 35s.

THIS book by the architect of the Time & Life building in Bond Street deals with the practical aspects of large and small office buildings and has been written to provide basic information for architect, client and property owner. It is illustrated with examples from a number of different countries and discusses in some detail the requirements which an office building must meet. The text covers the problem of office building design and deals with zoning and orientation, planning approach, planning procedure, fenestration, vertical traffic ways, internal partitions and finishings, mechanical services, catering facilities and architectural style. Much of the information in the earlier section of the book is conditioned by the speculative nature of many of the office building projects at present under construction in London and the need for economic planning, maximum lettable floor space and a commercially attractive layout appear to be dominant in the author's mind. A great deal of the information given will be of considerable value to architects who are dealing with an office block for the first time and also to building owners who are considering a development of this nature. However, there is a shortage of tabulated information and much of the text could be presented in a "ready reference" form using charts, tables and diagrams instead of written text. The weakness of the book lies in the lack of information concerning materials and construction. For example, cladding for contemporary framed office buildings receives little attention and the very important problem of curtain wall construction is reduced to one short paragraph giving only the barest information, particularly relating to one English patented system. The English illustrations in the examples given at the back of the book show the extreme poverty in design of English office blocks. For example, the author includes photographs of Chermayeff's excellent Gilbey House, London, which was completed as long ago as 1937, in order to provide adequate examples of English modern building. Other good examples are John Lacey's Fielden House and the office block at Hemel Hempstead by Maurice Bebb. Considerable space is given to the author's own contribution in the form of the Time & Life building in Bond Street. The examples from overseas are of much greater interest and include such well-known examples as the United Nations Secretariat, the

Ministry of Education and Health Building in Rio de Janeiro, the Rockefeller Centre and the Lever Building, New York. Although these examples are illustrated by photographs and in most cases by plans, the materials and construction are only thinly described and a great deal more information would be of value in respect of certain of the lesser known overseas office buildings.

In spite of its obvious limitations, this book would be a useful addition to the library of the average practising architect and will do a great deal of good if it is read by speculators considering office blocks in the City of London, where the low standard of design is constantly being deplored.

EDWARD D. MILLS.

Spon's Practical Builders' Handbook

9th Edition. Spon. Price 30s.

THERE is no call for me to introduce the speaker, he is well known to us all".

This expression, used at many functions, might be applied to this book, as I feel sure you will have a copy in your office library. I would advise you to replace it, however, with this new edition. The 9th edition of this standard work of reference has been completely revised and enlarged and entirely re-set for the first time for two decades.

For those who have never had a copy, it covers the whole field of building operations under headings arranged alphabetically and copiously cross-referenced.

This handbook of 590 pages is not a text book dealing in detail with any particular subject or aspect of architecture or building trade, but a collection of articles and memoranda on information brought together in a very handy form and which I doubt will be so readily to hand in any other publication.

Once you have had this book on your library shelf you will wonder how you managed without it.

Quantities and Estimating for Building Technicians—Plastering and Paving

John F. L. D'esté. Spon. Price 9s. 6d.

THIS volume is one of the series published by Spon's on the methods of preparing quantities and making estimates for individual or groups of trades. There are, as this book so ably illustrates, advantages in having a text book on quantity measurement individually related to a particular craft, one advantage being that the subject can be dealt with in a more comprehensive manner than if it was a general text book of all trades.

This publication deals with plastering and paving and is divided in the volume into two parts, the first cover-

ing measurement and preparation of quantities, the second, estimating.

It is obvious that for the student the study of quantities and estimating involves a comprehensive and detailed knowledge of constructional methods and materials, for without this knowledge it is clearly impossible to measure and evaluate the many forms of labour, materials and incidental services which are represented in the cost of a building.

While the author expects his readers to have already acquired this knowledge of their particular craft, his treatment of the subject in this volume provides a very broad review of all aspects of construction as well as detailed reference to those many labour and other matters which are not dealt with in ordinary building construction text books. His introduction and subsequent treatment of the processes of preparing quantities and estimates can readily be understood by the technician as well as those studying for professional examinations, for both of whom this volume should prove a mine of information.

M. E. T.

Plan Your Own Home Decoration

A "Homes and Gardens" Book. Written and illustrated by H. Dalton Clifford. Country Life. 15s.

It is surprising that furniture and decoration firms have not protested against the furnished flat racket. So few unfurnished flats are now available that many people must have to forgo doing their own decorating and choosing their own furniture. But for those who have empty rooms, money to spend and open minds, Mr. Clifford offers a well produced, helpful and quite funny book, making his points clearly with amusing little sketches.

As is so often the case, the "good" solutions appear rather trite to sophisticated eyes, while the "bad" ones look cosy and individual. Perhaps since we have what the Victorians lacked, the vacuum-cleaner, we may be permitted a little clutter, more cosiness.

Photograms of the Year : 1956

Published for Amateur Photographer by Iliffe & Sons, Ltd. 17s 6d.

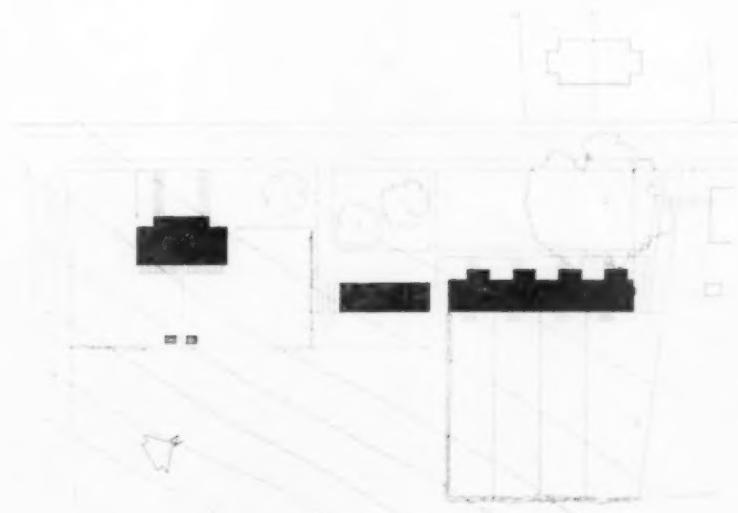
THIS well-known annual and suitable Christmas present contains 96 monochrome photogravure plates and 8 plates in colour selected from the work of photographers in many countries. It opens with a foreword by Miss Margaret Harker, V.P.R.P.S., who reminds us that it is not the value of equipment employed but the personality behind the camera that counts, and concludes with a chapter on Control and Choice in Colour Photography by Mr. E. Heimann.



A semi-detached pair

HOUSES AT PITSTONE For the Tunnel Portland Cement Co. Ltd.

architects : ARCHITECTS CO-PARTNERSHIP



A GROUP of six houses built for the Tunnel Portland Cement Company Limited to house some of their staff, on land adjacent to their Pitstone quarries. Four of these houses are 3-bedroom and are built as a terrace; the two remaining have four bedrooms and are semi-detached. The group is sited on the edge of a meadow adjoining a small medieval village church and form a group relating to the existing Victorian house in Church Road.

Houses at Pitstone

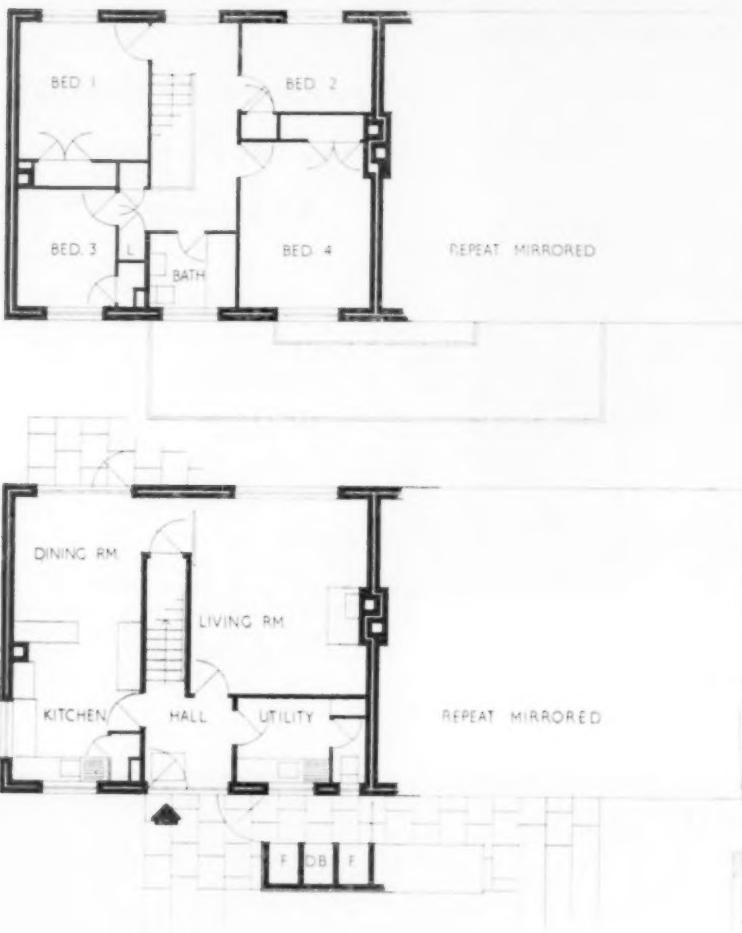
Both house types have been built to a specification and space standard rather higher than is usual in housing of this type. The three-bedroom houses are planned to 965 sq ft excluding stores. On the ground floor the kitchen is separated from the dining recess by a built-in fitment, while the dining recess is connected to the living room by a full height sliding door, thereby creating a continuous living space. A separate utility room for washing, which is off the hall, contains a second w.c. Each of these houses has two flues. A Rayburn cooker in the kitchen provides adequate hot water for the whole house, as well as providing space heating for the kitchen/dining area. The living room is heated by an Otto stove.

The four-bedroom houses are planned to 1,102 sq ft excluding stores, with a plan form similar to the smaller houses. The additional space available on the ground floor allowed for a



TERRACE TYPE HOUSE PLANS

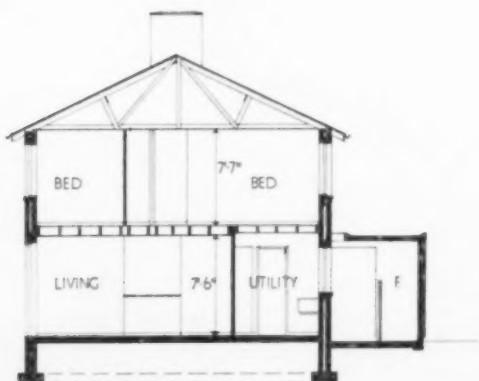




SEMI-DETACHED HOUSE PLANS

SCALE: 1in = 12ft

SECTION



Subcontractors:

Bricks: Erith & Co. Ltd. Door Furniture: J. Parkes & Sons. DPC's and Roofing Felt: The Ruberoid Co. Ltd. Flush Doors: Jaynelee Joinery Ltd. Roofing: Roberts Aldard & Co. Ltd. Sanitary Fittings: Adamsez Ltd. Sliding Doors: E. Hill Aldam & Co. Ltd. Stoves and Boilers: Allied Iron Founders Ltd. Window Furniture: Dryad Metal Works Ltd. Wood Block Flooring: Messrs. Hollis Bros. Ltd.

separate w.c. off the utility room. In all cases to avoid double access to the houses fuel stores and dustbins were incorporated in the entrance porch.

construction

The houses are built of 11in cavity walls with an outer skin of Swindon wire-cut bricks, and an inner skin of 4½in hollow clay blocks; party walls 11in cavity brickwork. The roofs are of grey slate laid at 25°. Floor finishes are quarry tiles in kitchens, halls and utility rooms and timber boarding elsewhere except in the terrace houses which have wood block flooring in living and dining rooms. The fuel stores are faced externally with 5in x 1in vertical boarding.

The scheme was completed by linking the two groups of houses with a row of six garages and a redbrick garden wall.

The general contractor was Charles R. Price.





Above: View of the house from the South

Below: Distant view from the North showing the Menai Straits and Snowdonia mountains in the background

House for Professional Man at Brynsiencyn, Anglesey

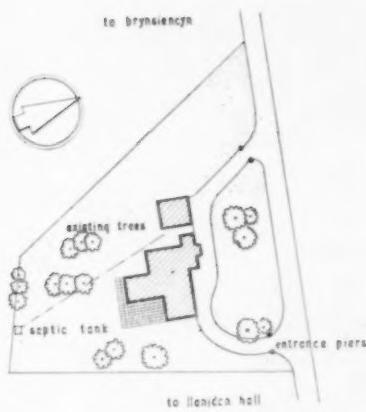
ARCHITECTS:

B. HALLWOOD LINGARD
& WILLIAMS, A.R.I.B.A.

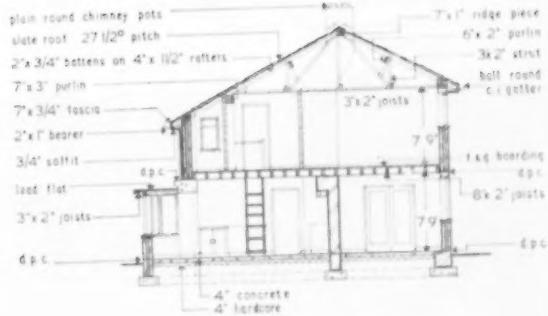
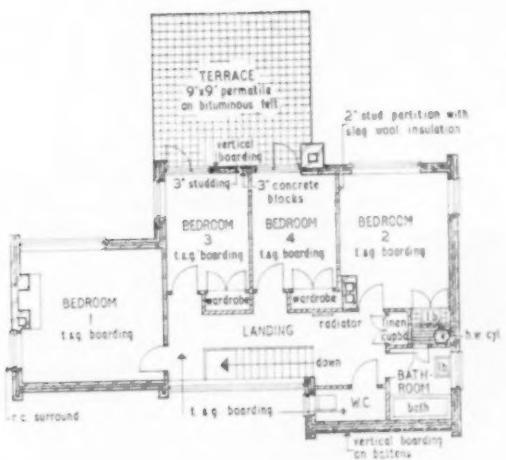
BUILT on the site of an old Anglesey croft cottage overlooking the southern stretches of the Menai Straits and the Snowdonia range, the house was built for Doctors J. Glyn and Mair Jones. The old

(Continued overleaf)





SCALE: 1 in = 64 ft



SCALE: 1 in. = 16 ft



General Contractors :
Messrs. Parry Bros., Liangefn.

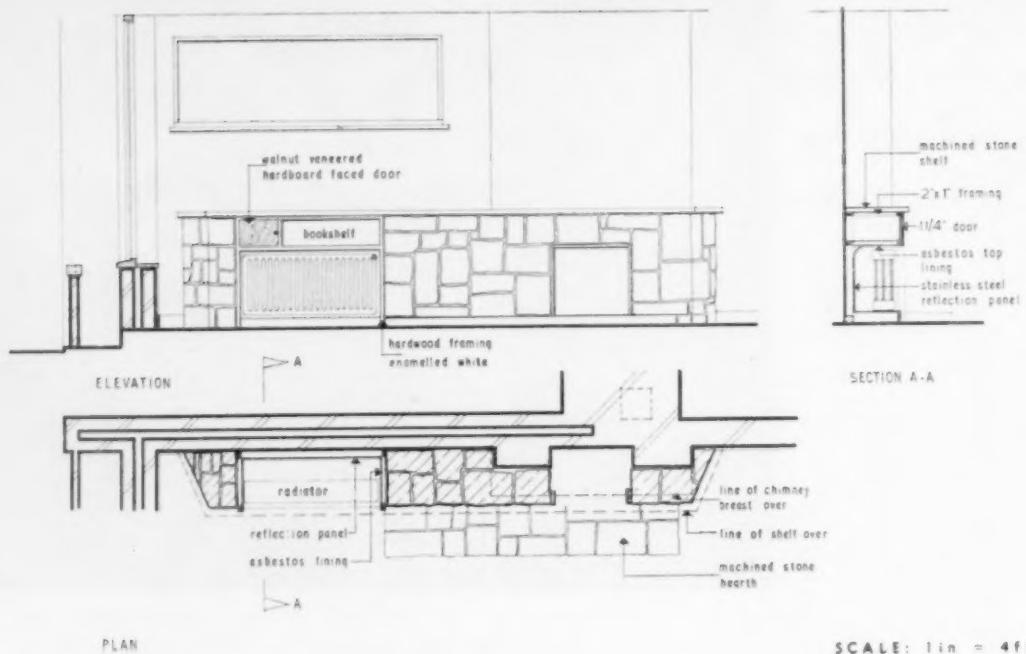
Sub-Contractors:
Windows: Messrs. Leylands & Sons (Colwyn Bay) Ltd.

Slate Roofing: William Royle & Co. Ltd.
Flat Roofing and Dampproofing: Permanite
Ltd.

Heating: Edgar Fitton & Co.
Radiators: Gulf Radiators Ltd.

Vitrolite Work: Leylands & Sons (Colwyn Bay) Ltd.

Thermo-plastic and Cork Flooring: Trinidad Lake Asphalt Co. Ltd.



House at Brynciencyn, Anglesey



walls of the cottage now enclose the terrace, on two sides of which the main living rooms of the house have been built.

The house is approached from the north side, the elevation being dominated by a large landing window and a long rubble stone wall linking the house and garage. This stonework, which is obtained from a quarry on the island, also forms the plinth and appears inside the house as a long low fireplace in the main sitting room. The view from this room is magnificent, the Menai Straits and the mountains beyond are seen across the terrace through the large plate glass windows. A 6ft 6in high wrought iron gate separates this room from the dining room and a glass wall forms the screen from the hall. This screen has shelves for display on alternate sides and is glazed with Spotlite glass. A concealed lighting fitting at ceiling level runs the full length of the screen on the hall side.

The study faces south-west across the terrace with fitted window seats below the window.

Window seats are also fitted to the bay window in the kitchen; with a circular table this forms a breakfast corner. The kitchen is divided by floor to ceiling cupboards into working and living areas.



View from the kitchen door looking along the hall to the study

The glazed screen on the right of the photograph divides the hall from the lounge and is glazed with Spotlite glass to give display ledges on the alternate sides. The double doors are glazed with Georgian wired polished plate glass. A continuous lighting runs along the top of the screen and is the sole means of artificial lighting in the hall

Hot water is provided from an Aga cooker and central heating from the Agamatic boiler fitted alongside.

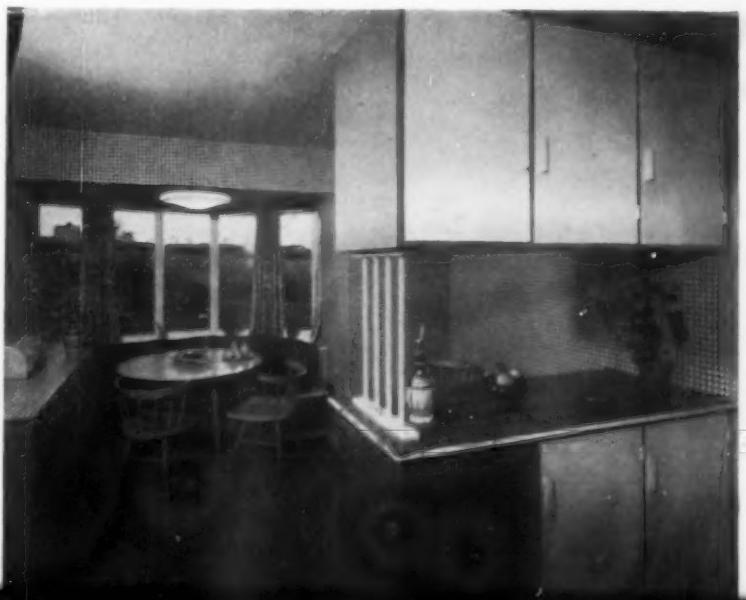
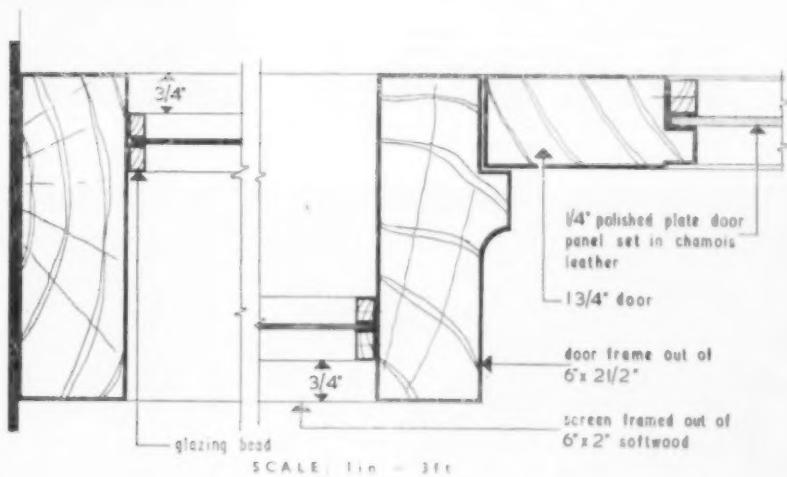
Floors are thermo-plastic tile covered with rubber underlay and plain, colourful fitted carpets in all living areas, the hall, landing and main bedrooms. The bathroom, W.C. and small bedrooms are floored with cork tile. The bathroom walls are lined with Vitrolite and fitted silvered plate glass mirrors.

Internally, colourful papers have been used to emphasize individual walls. Wrought ironwork made by a local blacksmith is used for terrace railings, the internal gate between the lounge and dining room, the balustrade to the entrance steps and the two sets of double gates.

Mains water and electricity were available on this rural site but drainage is to a septic tank.

The house is constructed mainly in 11in cavity walling but emphasis has been given to the main cross structural walls by projecting these beyond the face of the panel walling. This effect has been emphasized by the colour scheme. The main structural walls are treated externally with rust coloured Charterstone paint, the infilling panels are either painted with white Snowcem or faced with vertical Sanele weather boarding.

The roof is slated with random coursed green rustic slating from a North Wales quarry. The terrace is paved with random slate waste from the same quarry.



Pedestrian Overpass, Boston, Massachusetts

The Arthur Fiedler Bridge—erected by The Metropolitan District Commission and named after a famous orchestral conductor—crosses a complex of high speed traffic lanes and underpasses which, because of very limited possible foundation locations, necessitated two 96ft. spans. The clearance required over the highways was 14ft. The grade of the ramps to the bridge was restricted to a maximum of 5 per cent with no steps permitted.

It was first designed with an open rail, but the final design called for the walkway to be slung between the two reinforced concrete girders which form the rails. This reduced the vertical climb for pedestrians and baby carriages by more than three feet and the length of walk by about eighty-five feet.

The inside width of the walk is 8ft, the girder rails are three feet six inches above the walkway and the three supporting piers are 2ft 6in x 4ft steel plate shells filled with concrete.

The end spirals are cantilevered from a central core and the rails which here do no supporting are thinned to a mere 4in protective shell.

The function of the Landscape Architect was to determine the general location of the bridge and the design of the approaches and planting.

The bridge was required to start at the narrow park near Beacon Street and land at the south end of the concert oval. The only feasible intermediate foundation for support was considerably to one side of a straight line between these points. As a result the bridge was laid out on a 255 radius curve in plan. This meant the use of supporting girders curved in both plan and elevation which involved complex stress analyses and the use of 5,000-pound concrete. The bridge has proved very stable in spite of the fact that the contractor predicted to the Commission that it was going to tip over!



ARCHITECTS:

SHEPLEY BULLFINCH
RICHARDSON & ABBOTT

LANDSCAPE ARCHITECTS:

ARTHUR A. SHURCLIFF
& SIDNEY N. SHURCLIFF

ENGINEERS:

BRASK ENGINEERING COMPANY

Photos: Joseph W. Molitor

The Traffic Problem in Oxford

THE need for town and country planning has never been more apparent than in the case of Oxford, and it is a curious mischance that has made this university city such a blatant example of the lack of planning. For, until the first world war, Oxford was still entirely a university city and market town with printing as its only industry of consequence. It was chance that Lord Nuffield should have been a native of Cowley village, and that he should have selected this place, of any, to begin assembling parts of motor cars.

While the enormous development of his works during the inter-war period brought undoubted benefit to the nation, it could not have been in a worse position for Oxford and the university in particular. With the "High" and Magdalen Bridge as the only means of communication between the works and the industrial Midlands, heavy industrial traffic was bound to cause trouble for the peaceful pursuits of learning. Homes for the workers were built but, in common with most inter-war housing development in this country, provision for proper and adequate town centre facilities were not made.

Therefore, to this increasing industrial traffic was added a rapidly increasing daily flow of town traffic taking people to and from the shops, theatres, cinemas, and schools in the centre of Oxford. As one thing leads to another, the Pressed Steel Company began near the Morris factory in 1926 and, as in Birmingham, many small ancillary motor engineering works opened up. Despite the building of hundreds of homes, demand for them was not satisfied. Workers in large numbers travel daily to and from Oxford Station, which is on the wrong side of the city for the works. More traffic was therefore added to the already over-burdened "High".

While this industrial and housing development was going on, the university population of scholars, Dons, Professors, also increased. They have become more interested in the motor car than in the cycle and, though their contribution to the influx of daily motor vehicles is probably small at present in comparison to the total using the "High", nevertheless, it must be an important factor judging from the extensive car parking among the colleges. An additional burden upon the "High" came from a renewed national use of Oxford during the

1920's as a communications centre between London and the West (A.40), and between Southampton and Birmingham (A.34). These traffic developments, together with the attraction of the ancient university to tourists, have made the burden unbearable as regards peace in the colleges, damage to their ancient structures from vibration, and traffic congestion.

One of the reasons which have made the "High" such an important communicating link is the geographical and geological nature of the land. The overleaf diagram map shows old Oxford sandwiched between the two rivers, Thames and Cherwell, where there is a gravel terrace upon which the buildings were erected. Most of the land to the south of the "High" and the adjoining colleges of Merton and Christ Church and to the East and North-east is floodland, which, with the Cherwell, offers a barrier between Oxford and Cowley and Headington. Thus Oxford and Cowley-Headington have developed as two separate towns contrasting not only in quality of building design but in layout and provisions of normal communal facilities.

At first sight, the obvious solution is a by-pass of the "High" as close as the opportunity of unbuilt-on land would allow, and that is what has been suggested in recent years. Unfortunately, the solution is not so easy, for Christ Church Meadows, which skirt the southern limits of the colleges South of the "High", serve an extremely important function. They provide, through the amenity of their natural surroundings and character, all the peaceful precinct qualities of a Fellows garden or college quad. It is here that, through the centuries, famous scholars have found solace and intuition in these peaceful tree-lined walks, open grazing meadow and river bank.

Mr. E. G. W. Bill, the archivist of Christ Church, in some recent researches says that Charles II enjoyed here "his usual recreations of walking in the pleasant ambulatories adjoining (Christ Church)" as well as members of the university and citizens of the town. It is also an important sanctuary for flora and fauna. To avoid violating such an important sanctuary, other solutions have been mooted to skirt the southern fringe of these Meadows.

Another important matter is the visual aspect of Oxford as may be

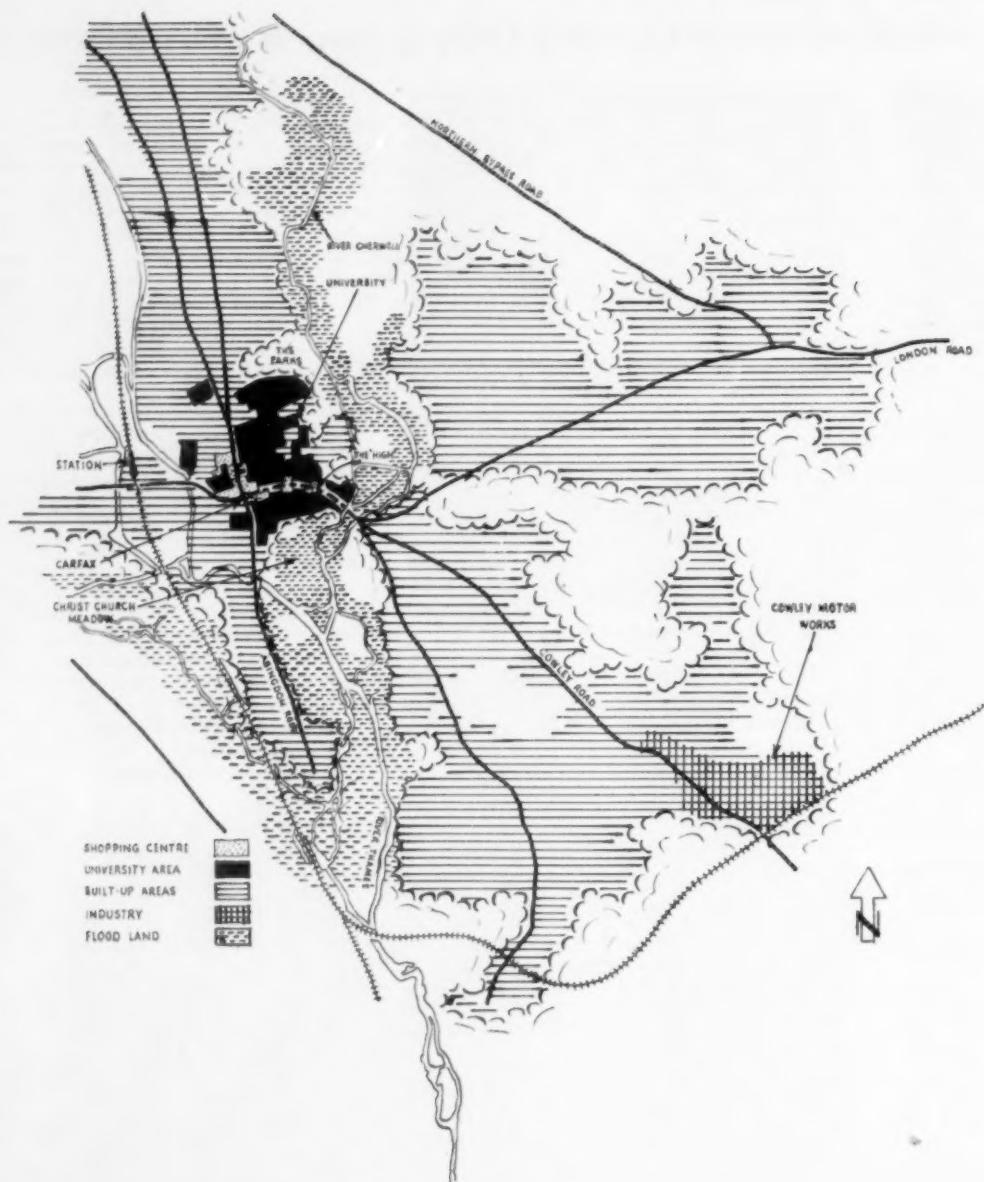
seen from this southern view point. It is one which was largely lost by the planting of elms in the 17th century to create the tree-lined avenue known as the "Broad Walk". One needs to stand further down towards the river to appreciate the fine panorama of domes and spires that can be seen from the "Broad Walk"—a point appreciated by Mr. Lawrence Dale in his proposal for a more southerly route across the Meadows.

It is true, therefore, that Mr. Thomas Sharp's proposal for running his bypass solution close alongside the "Broad Walk" would have offered an opportunity to remedy this loss, but to have double deck buses, heavy lorries, cars and vans trundling to and fro in the foreground would destroy the appearance of peaceful meadowland and wooded walks. Moreover, their noise would have invaded the lecture and study rooms of Christ Church and Merton College, while the Memorial Garden, created in 1927 for over £6,000 as the western entrance to the "Broad Walk", would have been destroyed.

Thus as one sat and digested these facts in a library close to the "High" and heard Big Tom succeed in penetrating the noise of traffic to chime the hour, it seemed to reflect the protest against this intolerable intrusion upon the historic calm of the "High" and prevailing opinion that the time had come for a decision. But how near to a satisfactory decision have the authorities come which will find general acceptance?

Following the Minister's recent visit to Oxford when he met all concerned—representatives of the City Council, the university, of the Oxford Preservation Trust and of the Chamber of Trade—the City Council have decided to submit to the Minister of Housing and Local Government a scheme for a bypass to the south of the Meadows, and a new northern route passing through the University precinct from St. Giles Street. This, together with the redevelopment of the St. Ebb's area, would create an inner ring road system.

Whatever the merits of these proposals, and one is glad to find the Meadow sanctuary left alone, one cannot help feeling that they are still being made without adequate information as to what their true effect would be. As already explained, the "High" is used by traffic which



Oxford Traffic

can be identified with three main objectives:

1. Through traffic with no business calls in Oxford which all the year round consists of heavy lorries, vans and motor cars.
2. Traffic which is taking people to and from the station, shops, theatres, cinemas daily, and their homes, and
3. Traffic which is taking members of the university to and from their homes and the colleges.

While the 1949 origin and destination traffic census clearly defined through traffic of category 1 as representing 15 per cent of the total, it in no way separated the balance into the other two categories of "town" and "gown" traffic. Moreover, no attempt has been made to assess the extent to which the provision for local town centre facilities in Cowley and Headington will, when realised, alter the problem.

Without such information, the Planning Authority is bound to be working in the dark, and may well make fundamental errors of judgement. To separate the traffic flows

out into their appropriate categories to determine those which would use a new road if routed in a certain direction requires a fresh census; while the answer regarding the effect of providing town centre facilities at Cowley depends upon the extent to which they will make Cowley independent of old Oxford. The latter can only be discovered by means of a social survey into the habits of the population related to a given set of communal services.

The answers obtained in this way would probably show that the "High" should never be closed entirely to traffic, for there would always be the

university members and the tourists bent on sightseeing etc., but it might prove that the only other traffic would be that normal between two towns more or less independent of each other. In that case no more than the outer bypasses already agreed upon would be necessary, and inner relief roads would probably not then be necessary.

In short, category 3 traffic would require the "High" to be left open to vehicular traffic whether or not there was an inner relief road system; category 1 would vanish from the "High" on to the outer ring of bypasses, while category 2 traffic would be reduced to what is normal between two towns in which the "High" would not be excessively used.

This is a step further than leaving the assessment of the effect of providing the Cowley shopping and entertainment centre and the outer bypasses for time to prove the need before embarking upon inner relief roads. It would attempt to analyse that effect now, because property to be affected by internal road improvements must be controlled for that purpose if they are to be acquired for them at some future date.

DEREK PLUMSTEAD

Building Foremanship

The training of general foremen in the building industry is a matter of major importance requiring the most careful selection of candidates, the provision of facilities for gaining practical supervisory experience over a period, and a planned and detailed study of the foreman's role and responsibilities.

These points are strongly emphasised in the recently published Third Report of the National Advisory Committee for the Training of General Foremen, covering the period December, 1953, to November, 1955.

The Committee—on which are represented the National Federation of Building Trades Employers, the Scottish National Building Trades Federation, the Ministry of Education, the Institute of Builders, Technical Colleges and General Foremen's Associations—describe in their Report the further development of the certificate course in general foremanship studies introduced on an experimental basis two years ago and give information about the detailed scheme for the course with related examination drawn up in co-operation with the City and Guilds of London Institute. It is anticipated that the first examinations based on the course will be held in the summer of 1956. Specimen question papers are included as an appendix to the Third Report.

The certificate course caters for those men of experience in the industry who have satisfactorily completed their basic training, who have already had some supervisory experience, and who wish to learn more of the administrative and technical subjects associated with the work of the modern general foreman.

The course, which calls for two years' part-time study, includes instruction in the elements of supervision, site administration and control, site organisation and method and personnel administration. While students for the certificate course will normally be expected to hold the Institute's Full Technological certificate in a building craft and the Ordinary National certificate in building, it has been recognised that some students otherwise suitably qualified may not have had the opportunity to gain sufficient knowledge of general building construction. For such students colleges providing the course may make arrangements to provide, concurrently with instruction in supervisory subjects, the necessary basic instruction in general building construction.

It is also appreciated that formal courses of study may not be appropriate for foremen already holding responsible positions, but that they might, however, derive advantage from opportunities to study problems encountered in their work. The Committee, therefore, suggests the organisation of short series of lectures or study groups with specific reference to administrative and supervisory problems. Short residential conferences on foremanship studies are also recommended.

Because it is convinced that the higher standards of supervisory competence among general foremen vital to increased productivity and to the future well-being of the building industry can be secured only if all concerned are prepared to play their full part, the National Advisory Committee invites employers, educationists and general foremen to consider certain recommendations which are included in the Report. In these recommendations employers are reminded that general foremen are an essential part of management. Employers' associations and technical colleges are asked to act together to ascertain local requirement in foremanship training and to assist in the proper selection and preparatory training of students for admission to courses. Experienced general foremen are also asked to assist by ensuring that their associations take an interest in the training facilities available in their areas and encourage young men to attend the courses.

Copies of the Report are obtainable from the National Federation of Building Trades Employers, 82 New Cavendish Street, London, W.1., price 2s. each.

Building Industries Training Programme for Eastern Counties

Recognising that higher productivity and lower costs in the building industry can only be brought about by greater efficiency at all levels, the Eastern Federation of Building Trades Employers, which covers the counties of Norfolk, Suffolk, Essex, Cambridgeshire, Huntingdonshire, Hertfordshire, Bedfordshire and the Soke of Peterborough has just announced a most comprehensive training programme for 1956. The courses which have been arranged are all designed to increase the efficiency of the management side of the industry, and are in addition to the large scale programme of craft training through the National Joint Apprenticeship Scheme.

In February and March, three week-end Residential courses for General Foremen will be held at Pendley Manor, Tring, Belstead House, Ipswich, and Wymondham College, Norfolk. The syllabus will include lectures and discussion on such topics as "The Principles of Management", "Personnel Management and Welfare", "Trade Unions and the Industrial Agreement", "The General Foreman and the Building Contract", and "Site Organisation and Administration".

Perhaps the most important course proposed is a one week Residential Course for Senior Executives of Building Firms which has been arranged for next spring at Madingley Hall, Cambridge, in co-operation with the University of Cambridge Board of Extra-Mural Studies. The purpose of this course is to provide a background of knowledge of the growth and present extent of the British industrial structure with special reference to the function of management, particularly in the building industry.

In the autumn there is also to be a residential week's course at Ipswich for Building Management students when an appreciation will be given of the organisation and problems of the building industry and its place in the country's economy.

In view of the importance of costing in an industry as competitive as building, a series of one day courses will be held throughout the region on "Keeping a Check on Building Costs" at which the Director of the Federation, Mr. R. W. Porter, M.B.E., F.C.I.S., A.S.A.A., A.I.M.T.A., will on the basis of recent research, outline the basic principles of a costing system which builders can adapt to their own needs.

In order to deal with the detailed administrative work involved in running the Federation's training programme it is intended to appoint a Training Officer whose job it will be to co-ordinate the various aspects of training, both technical and managerial.

Paints for Structural Steelwork

THE Third Interim Report* on this subject, prepared by the Protective Coating Sub-Committee of the Corrosion Committee of the British Iron & Steel Research Association, has recently been released. The responsible Committee has among its membership some of the best known names in the paint field and consequently its findings, although again only an interim report, should be considered as some of the most reliable information available on the subject.

It is noteworthy to find the following words in the Press Notice accompanying the Report—"In the past, constructional engineers regarded the final painting of structural steelwork as a relatively minor consideration. The usual practice was to cover the new erection with a red lead primer and a top coat of any paint available. But rising costs have made such a policy progressively uneconomic, and a more scientific approach has therefore become essential."

It has been pointed out that the assessment of protective schemes is not a simple matter and takes a long time. These are two facts which the architects and the building industry generally appreciate only too well since paint seems to be the material about which one hears by far the most complaints in the industry.

The tests were a joint effort by B.I.S.R.A. and the British Paint Industry and involved priming paints made from a variety of pigments and media, protective paints based on tars and bitumens, metallic coatings, and methods of surface preparation. These last two aspects of the problem have assumed a particular importance over recent years.

Many hundreds of test specimens were prepared and exposed at two selected sites. One, at Brixham in Devon, provided a mild seaside atmosphere, while the other, at Derby, was in a severely corrosive

industrial atmosphere. The contrast between the two is shown by the fact that bare steel corrodes about three times as quickly at Derby as at Brixham; on the other hand the rate of paint breakdown at Brixham is increased by the longer periods of sunshine there. Mild steel plates, 15 inches by 10 inches, were used throughout, the thickness being $\frac{1}{4}$ or $\frac{3}{16}$ of an inch.

These investigations, started so many years ago, have begun to yield interesting results. It has been shown, for example, that twenty of the priming paints under test gave better protection than the conventional red lead in linseed oil paint. Several of these paints contained chromate pigments bound with a linseed oil medium; other examples based on alkyd vehicles were pigmented with a mixture of non-leaving aluminium powder and basic lead sulphate or alternatively zinc oxide. These latter paints are much easier to apply than the old-fashioned red lead formula and it will be interesting to see whether the promise shown in the tests is confirmed in actual working experience.

The superiority of grit-blasting as a preparatory method was clearly established and the value of phosphating also demonstrated. The tests have not proceeded long enough to furnish a reliable comparison of the merits of zinc and aluminium coatings as a basis for a paint, but there are already indications that cottages of these metals, 3mils thick are superior to the conventional terne plate, 1mil thick.

In the first series of tests the most striking result was the marked superiority of the priming paints in a linseed oil medium based on two parts of linseed stand oil to three parts of alkali-refined linseed oil. This, it seems, was due, at least in part, to the fact that paints based on this medium formed thicker films than those paints with synthetic media. At least one inhibitive pigment is present in all eleven long-lasting paints and in all cases, except two, this is a chromate. One of the two exceptions contained 40 per cent of red lead, 40 per cent white lead

and 20 per cent of asbestos and this paint has been adopted as Type C in B.S.2523 — "Ready-mixed oil-based priming paints for iron and steel". It weighs less per gallon than the straight red lead paints such as the reference paint, which in fact was to the earlier edition of the B.S. for red lead based priming paint, and it has better storage properties.

In the second series the value of metallic pigments, especially aluminium and zinc powders, the effects of adding inhibitive pigments to priming paints containing metallic pigments and the effects of adding lead soaps to red oxide in linseed oil paints, were all studied.

The tests of ninety-one paints show clearly that within the range of formulations tested paints containing aluminium powder were better than those containing zinc. Eight paints containing aluminium in alkyd medium gave protection equal or superior to that of the standard red lead primer. These paints also contained basic lead sulphate or zinc oxide as well as aluminium and on the whole those with basic lead sulphate proved better. The only other paint with a better performance than the reference red lead paints, consist of zinc powder and zinc oxide in a polystyrene medium.

While caution is desirable in generalising from these results, in the examples tested the superiority of aluminium as the pigmenting agent are clearly demonstrated. The aluminium paints in an alkyd medium are lighter, more stable in the can, flow more readily under the brush, dry more quickly and form a harder film than the usual red lead in linseed oil priming paints. Moreover when zinc oxide is used as the blending agent, the paints are non-toxic and can therefore be applied by spray. If subsequent experience confirms the general superiority of aluminium priming paints, conventional practice in painting structural steel may well be profoundly affected.

The third series of tests concerned the use of metallic coatings as part

* Obtainable from the British Iron & Steel Research Association, 11 Park Lane, London, W.1, price 5/-, post free.



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Paints for Structural Steelwork

of a protective scheme with paint. More complete knowledge of the problems involved is important to engineers and this series of tests was therefore designed to investigate current materials and practice. The series included a study of the effects of phosphating and flame-cleaning of steel surfaces. It has proved that a clean working surface is essential to the proper performance of any paint scheme.

After six years exposure none of the zinc or aluminium coated specimens had failed by rusting to any significant extent. There were indication that hot-dipped terne 1 mil thick was less satisfactory under paint than aluminium or zinc coatings of 3 mils. As neither the aluminium or zinc coatings have shown appreciable signs of breakdown it is not yet possible to assess their relative merits.

Paint flaking from hot-dipped zinc coatings, a frequent source of trouble, was eliminated by using proprietary phosphating processes, and was considerably reduced by a phosphoric acid surface wash.

Among the surface preparations for steel without a metallic coating the best performance was given by paint on grit-blasted and unrusty surfaces. The poorest performances, as might be expected, were from paint applied to surfaces partly descaled by weathering and then wire brushed. Similar surfaces when flame-cleaned gave an improved performance and in fact flame-cleaned surfaces were almost as good as those pickled and weathered, carrying rust but not mill-scale.

The fourth series of tests related to the study of tar and bitumen paints numbering fifty-four in all and it is interesting to find that most of the paints were generally inferior to paints containing drying oils or synthetic resins.

As an ordinary paint user it is interesting to find that the reference paint used for these tests was one to a British Standard and that so far only certain of the alternative materials were as good or better and of these only a few are at present general commercial pro-

ducts. One can but assume that when these tests have continued longer, and there are obviously better paints than those used in the past, B.I.S.R.A. will prevail on B.S.I. to include them in their paint standards. It is at least satisfying to note that among the "as good or better" materials Type C of B.S.2523, issued last year, is included. This test work shows, to some extent at least, that it is possible, contrary to some statements I have heard, to lay down a British Standard for a paint which will ensure that the purchaser can be certain of at least a reasonable degree of protection without having to specify a proprietary material. Minimum specifications for paints based on performance requirements are not impossible to lay down for many types of paint as has been proved by the Ministry of Defence paint standards (D.E.F. Series, obtainable from H.M.S.O.) and by specifications developed by certain Local Authorities. The difficulty appears to be to persuade the paint industry to adopt specifications and some sort of certification scheme to give the purchaser an assurance that what is in the can complies with the specification, as few of us can afford tests on the small quantities we order at one time for our clients. Standards and the certification of deliveries made to them would give the specifiers and users an assurance as to the minimum quality in each type, which many of us feel we do not now have, even by selecting proprietary brands, since we have no yard-stick by which claims or formulations can be compared or evaluated for these much advertised competing products. An assured quality of the paint would at least permit us to place the entire blame for failures on the painter, which nearly always is said by the paint suppliers to be the cause of the breakdowns we have.

One is even inclined at times to feel that it is a pity that we have not so far found an alternative protective material to act as a competitor to paint. If we must use paint, however, high quality is becoming more and more important as the cost of applying it rises continuously. Several of my friends

have said that they would be willing to pay an extremely high price for paint if the manufacturers would supervise the application of their products, take responsibility that they are properly applied and give a guarantee that both the paint and painting would not require further labour and scaffolding costs for their renewal within seven years. One cannot help but feel from the amount of advertising one sees that the retail paint trade through the shops and stores is easier to satisfy and possibly produces better profits than do the supplies sold to builders and decorators and especially through the architects. Is it perhaps that the retail trade can be supplied with products less costly to make but which may be relied upon to need renewal reasonably soon after application thus maintaining constant production?

The continued publication of results of reliable testing, as exemplified by this Report, may in time put users in a position to specify what they want, so may this work continue with the degree of skill and patience which B.I.S.R.A. have given to it so far. It would be useful also if the Timber Trade, through some organization such as the Timber Development Association, would undertake a similar long term programme on the protection of timber by paint. Timber products at present suffer much through poor painting, especially in the mass production joinery industry where indifferent quality paints are often applied by high speed methods which tend to cause subsequent troubles.

In this connection it should be noted that recently the various British Standards for joinery no longer require priming before the goods leave the joinery works. It seems possible that this is because priming paint as specified in B.S.2521 is a high quality product which needs to be brush applied, thus making the first cost of joinery higher; the proper application of paint of this quality by brushing before joinery leaves the works would undoubtedly reduce maintenance costs, which, unfortunately, is a matter of no great interest to the joiners or in fact to most builders.

DUTCH UNCLE.

POINTS FROM PAPERS

The Profession in Africa

Extracts from the inaugural address given at the Royal Institute of Chartered Surveyors on Monday,

14th November, 1955 by the President W. R. BRACKETT, O.B.E., T.D., B.Sc.

FOR some centuries Arabs, Indians and Europeans have used the ports of Africa, but it has only been in comparatively recent years that the interior of the continent has been opened up for the development of industry, mining and improved agriculture.

Uganda, for instance, was unknown until almost a century ago, and its development from a subsistence agricultural economy started only about 50 years ago. Much of Uganda is a green paradise and its water resources are considerable. Yet its agriculture is producing only a fraction of the wealth that it might, the Owen Falls scheme is harnessing only a part of its potential water power, and its mineral resources are little known and almost untapped.

The development which has taken place and all further development involve disturbances in existing patterns of land use and occupation: changes which, when imposed by Governments, are no more popular in Africa than nearer home.

For progress to be made, it is necessary that there should be secure systems of land tenure, and in order that development capital may be advanced on proper security, proprietary rights need to be negotiable. These and other changes involve considerable interference with native custom.

Whilst we, as professional men, are not directly concerned with the political considerations involved, we can I think be of help in adapting old or devising new systems of land tenure and transfer, suited to the geographical and ecological needs of various areas.

Land Survey

In all of the territories visited there is registration of title in urban and some rural areas based upon land survey. That is to say, that boundaries are indicated by marks or beacons, usually below ground level, which are fixed to a very high degree of accuracy by reference to the trigonometrical survey.

Once a title has been registered, conveyancing of that unit is quick and simple. I was told that it is quite possible in a town in which there is a registry for all searches to be carried out, and the contract signed, in the course of an afternoon.

But where the unit being sold or leased is a part only of the registered unit, there can be no registration; and the new owner can have no negotiable title until the new unit has been surveyed by a land surveyor who, if a private practitioner, may have to hand in his field books, computations and diagrams, for checking by the Government land survey department.

Land surveyors take time to recruit and train. It is only to be expected, therefore, that in a territory in which there has been a great acceleration in development, the demand for land surveyors' services should out-run the supply. I was told of delays in registration or survey, ranging from four months in the Union to some years in other places. As no development finance is likely to be forthcoming until title is registered, this shortage of land surveyors can, and does, hold up development. Everywhere we went, with the exception of the Union, we met the plaint of an acute shortage

of land surveyors which showed little sign of being made good.

Careers masters at our schools might well note that here is a career of high professional standing which should suit any healthy man with a mathematical bent and a taste for an open-air life.

Shortage of land surveyors can not only hold up urban or industrial development, it can also have political consequences.

Whilst there is registration of title in urban and European farming areas, there is, in general no system of title in African agricultural areas; and land is largely occupied (as distinguished from "owned") on a customary tribal basis.

Even in Buganda where there is a system of registration of African owned land, tribal custom still operates in the distribution of an estate on a death, and original large units are often fragmented into uneconomically small ones.

For African agriculture to progress, it is necessary that secure title be generally available, for until a man owns land and puts a permanent house upon it, he will have little inducement to adopt an improved standard of farming. It is so much easier for him to exhaust a little bit of land and move on as was done by his fathers.

It is also necessary for holdings consisting of scattered small strips to be consolidated, and this re-organisation of African land units would seem to be one of the major tasks facing the Governments of several territories.

This is not unlike the process which took place in this country between the Black Death and the end of the great enclosures. The old open field villages were gradually consolidated into farms, and boundaries to holdings were formed which became so well known and accepted that conveyancing by reference to survey has never here been essential.

In Africa it is different, and in the absence of recognisable boundaries this re-organisation of land units and grant of titles are dependent upon land survey.

Varying Roles of Land Surveyors

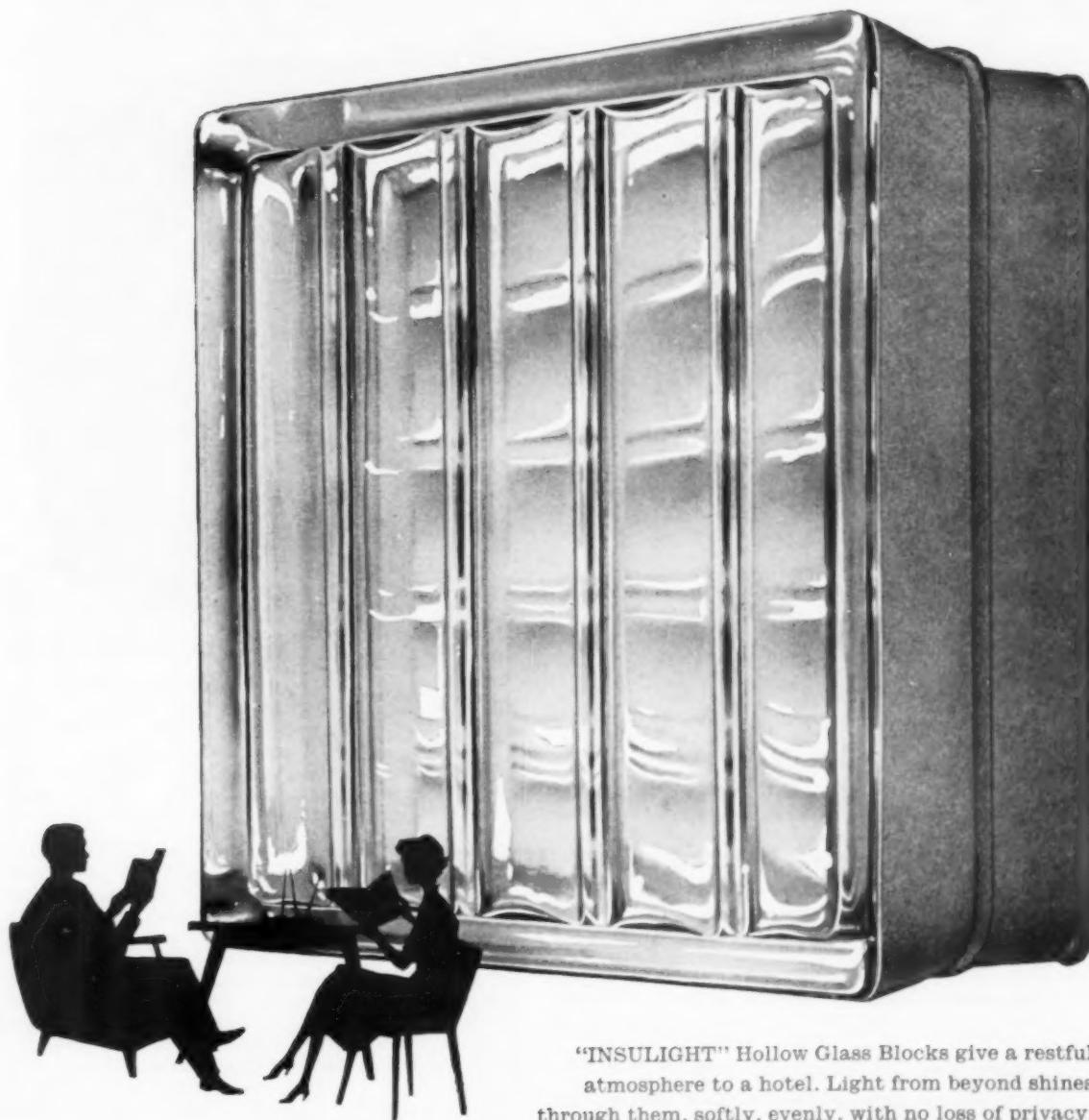
The roles played by land surveyors vary markedly in various areas and as between private practitioners and surveyors in survey departments.

The private land surveyor is primarily what his name implies, a surveyor of land. But he must also have an intimate knowledge of land tenure, the landlord and tenant system, encumbrances and town planning, since it will often be a part of his duty in preparing the plan for sub-division of an estate for development, to agree lay-out details with the town planning officer.

The role of the official surveyor itself varies considerably. In the Union the trigonometrical survey and the preparation of maps is the duty of an organisation resembling our Ordnance Survey. The Surveyors-General of the provinces do little actual survey and are mainly concerned with checking and verifying the work of private land surveyors before approving their diagrams and passing them to the land registry.

In other areas, the director of survey is responsible for

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The Profession in Africa

mapping, title surveys, management of Crown Land and alienations for both mining and other development. But he is not necessarily responsible for town planning, and it can happen that a town planning authority gives an approval but the director of survey, in his capacity as lands officer, does not agree with it.

In one area the director of survey combined all of these functions—and with great efficiency. But as a system, it seemed to me open to criticism on the ground that the qualities and range of knowledge required of one man were greater than one would normally be justified in expecting to find.

It is on this account that the present composition of the land surveying profession varies in different territories. In the Union the great majority of land surveyors are in private practice, whereas in East Africa the reverse is the case. It so happens that in East Africa we heard more of the shortage of land surveyors than anywhere else, and it would seem that there must be openings there for private practising land surveyors. Improved statutory scales of fees which are being introduced should help to attract them, and I was told in one area that such was the anxiety of developers to get surveys done that they were willing to pay substantially in excess of the statutory scale to secure results.

Licensing of Land Surveyors

In view of the important functions which they perform and because they are carried out on behalf of the Government which gives either a legal or moral guarantee of title, land surveyors are required, in all of the territories visited, to hold a licence before they can undertake cadastral surveys.

Land tenure and other law varies from territory to territory (even within East Africa and the Federation of Rhodesia and Nyasaland) and each territory has its own qualifications for its licence. Thus a man holding a Uganda licence and no other land survey qualification would need to re-qualify in order to secure a licence in Kenya, an adjoining territory in the area of the East Africa High Commission.

This leads to a lack of flexibility in the land survey profession so that individuals not in possession of a qualification (such as that of the R.I.C.S. or a Dominion licence) which is accepted by the Colonial Office, are not as free to move from one territory to another as are most other types of surveyor. It would be unreasonable to expect the demands for land survey to remain constant for appreciable periods in any particular area. There would, therefore, seem to be a case for facilitating the movement of land surveyors from one territory to another, so that territories experiencing a shortage of qualified men could be helped out from the survey resources of others whose position was easier.

New Zealand has for long pioneered this conception, and it was with great pleasure that earlier this year I signed the first reciprocal agreement between this Institution and the statutory land survey board of another Commonwealth nation, i.e. New Zealand. I hope and believe that it will be the forerunner of many similar agreements.

I would like to stress two points concerning such agreements: first, that as land tenure and registration law vary in different countries it is only reasonable to require a period of experience in the new area and tests of local law and practice, before a licence in that area can be granted; and secondly, that such agreements are strictly bi-lateral as between the two countries concerned, and do not commit any other country, not a party to that agreement, with which one of the parties may have or contemplate another agreement.

Quantity Surveying

In almost all areas the profession (Quantity Surveying) is registered, often jointly with architects. This has advantages in securing that competition from inadequately qualified practitioners does not develop, but disadvantages too such as that a special fee for an unusual job cannot sometimes be quoted without reference to the registration board.

I was interested to see that quantity surveyors had shown public spirit and initiative in seeking to solve special problems. In Salisbury, for instance, quantity surveyors had been the driving force leading to the adoption of *pisé* construction (that is the formation of walls out of rammed earth) for building a considerable number of houses urgently needed after the war for European housing: and very attractive, cool and serviceable houses they are, though their cost was relatively low.

In Natal, group research into price structures had been sponsored by quantity surveyors, which had led, I was told, to significant economies being made in housing for Africans and in certain classes of public building.

Town Planning

The town planner has now arrived in the African scene in most of the larger urban areas. Usually he is an architect working without direct help from valuers or engineers as members of a planning team, though when town planning comes under a lands officer the services of a valuer on specific points can normally be obtained.

Certain towns and cities, such as Kampala and Pretoria, which are set amongst hills give great opportunity which has been used with imagination and success. Others, such as Salisbury, which are flat and already committed to a grid-iron street pattern, give less opportunity, though there is much to be done in the suitable siting of rapidly expanding industry, the re-development of obsolescent central areas, the development of suburban areas and the planning of improved road networks.

Except in the new foreshore area of Cape Town there appears to be little attempt to control elevations, and there is in consequence considerable incongruity between many of the large central blocks which are springing up—often to great heights.

In Cape Town a unique opportunity has been presented to town planners. The old city centre, which is much restricted, grew up near to the docks and backed on to Table Mountain. The formation of new and larger docks made available a large amount of filling material which has been used to reclaim 480 acres of land to form an extension of the shopping and commercial area.

The work of reclamation started in 1937 and ten years were devoted to the evolution of a plan for the area and adjacent land which involves the removal of a power station and the main passenger and goods stations. The Royal Institution is indebted to a member in Cape Town who kindly secured and presented to the Library a copy of a book (now out of print) describing and illustrating the stages through which this plan passed in the course of its evolution.

Development of residential areas is frequently at very low densities such as one dwelling to four acres, and residential estates are often well out from city centres. This is probably caused in part by the abundance of land in many areas and the fact that there is often little or no rating outside municipalities. A typical consequence is that Salisbury, a city of some 50,000 European and 100,000 non-European population, is stated to have a diameter approximately equal to that of Greater London.

This leads to a great increase in the cost of roads and other public services. Thus in the suburban area of one city, water costs 7s 6d a thousand gallons, and in many residential areas in East and Central Africa there is no water-borne sewage disposal.

A more serious consequence is that the provision of public transport to suburban areas is uneconomic: in fact in many of the larger towns developed on low densities in the residential areas, there is no adequate suburban transport service at all. This tends to a greater use of private cars for shopping and business travel, with the attendant problems of traffic congestion and car-parking, in spite of streets which are often of very great width.

Also serious is the fact that the possession of a car is virtually indispensable even to a young man. This presents in itself an appreciable increase in his cost of living at a time in his life when he is least able to bear it.

Areas such as the Copperbelt of Northern Rhodesia and the new goldfields of the Orange Free State offer great opportunities for imaginative planning; opportunities which are being grasped by keen municipal authorities and industrialists, though sometimes without all the professional advice that would best help them.

A novel approach to the compensation and betterment problem is found in Southern Rhodesia where the estate developer can be required not only to make available, as a condition of his planning consent, the land needed for public open spaces, schools and the like, free of cost, but can also be required to pay a sum of money towards the endowment and development of the township.

Agriculture

Chartered surveyors trained in the management of agricultural estates might well be of considerable value in certain primarily managerial schemes.

One example is the European Settlement Board in Kenya which buys up large farms in the Highlands, divides them up, provides additional houses and buildings and lets the new units to approved Europeans. Thereafter it supervises and advises until the new settler has found his feet.

Another is the re-organisation of African land units which is being undertaken both in East Africa and Rhodesia. This involves the inspection and valuation of an African's existing fragmented holding and the planning of a re-allocation, designed to give him an equal value of land in a single, balanced farming unit.

Valuation

An unusual device has been adopted in certain new townships where traders, in return for advancing a certain amount of money to start municipal developments, were granted security from fresh competition for a period of 21 years. Where the township has thrived this has naturally proved a handsome investment.

In the Union and Southern Rhodesia, legislation on the administration of the estates of deceased persons requires that the value of the estate must be declared and is, except for small estates, certified by a person appointed by the Master of the High Court and known as a "sworn appraiser." This appointment is based on no professional qualification but has come to be regarded by its possessors as the hallmark of a valuer.

The system was no doubt essential at one time but seems to me to have outlived its usefulness. Now that estate duty has been introduced, there would seem to be a case for a small valuation department under the local Treasury which could check and agree valuations submitted by practitioners. Only in remote areas would the appointment of a sworn appraiser then be necessary, and the term would cease to be used as if it were a qualification. Indeed, discussions with

responsible officials encouraged the hope that the days of the sworn appraiser in the Federation may be numbered.

You will gather that I consider there is considerable scope for valuers both in private practice and the public service. I feel that I should add that certain of the valuers already employed are not in the departments in which they can be of most use, nor are their reports the basis of subsequent negotiation as often as they might be.

Property Values

Land values in urban and suburban areas are, in general, high. Values of land in suburban areas for housing are somewhat higher than one would expect in the United Kingdom on comparable development, whilst prices in most central positions are surprisingly high. I was quoted a price of £10,000 per acre freehold for a flat site not very centrally situated in a city with a population of 100,000, and £450 per square yard freehold for central sites in Johannesburg.

House prices and costs seemed higher than I would have expected, but commercial blocks of simple type seemed relatively cheap. There is great demand for business accommodation; and, in consequence, investors in such blocks obtain attractive yields. There is now no rent control on such tenancies.

Towns are expanding at such a pace that capital appreciation may reasonably be expected, and there would seem to be a very good field for investment which is made more attractive by exceedingly low death duty and the fact that separate estates in some countries need not be aggregated with estates in the United Kingdom for estate duty purposes.

In all areas visited there has been extensive building of flats which let at high rents. But at least in some areas there seemed the possibility that for the moment there might have been overbuilding of this type of property.

Undeveloped agricultural land is everywhere cheap, but the costs of fencing, water supply and the provision of buildings are considerable.

Demand for Investment Capital

In areas such as East Africa and Rhodesia where industrial commercial and housing development is proceeding at a great pace and from small beginnings, it is natural to find that there is a shortage of capital.

In consequence, the banks have had to finance much physical development, even though they do not regard it as their proper sphere.

These areas are amongst the few remaining ones in which British capital is not only welcomed but unfettered. In addition, it can secure better returns than in the United Kingdom, and I think that those of us who have clients looking for a wider and more attractive spread of their investments might well advise them to look in the direction of Africa, despite the inter-racial and political problems that cloud its distant horizon.

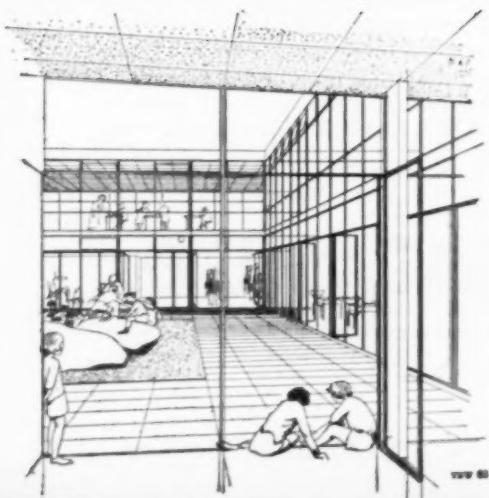
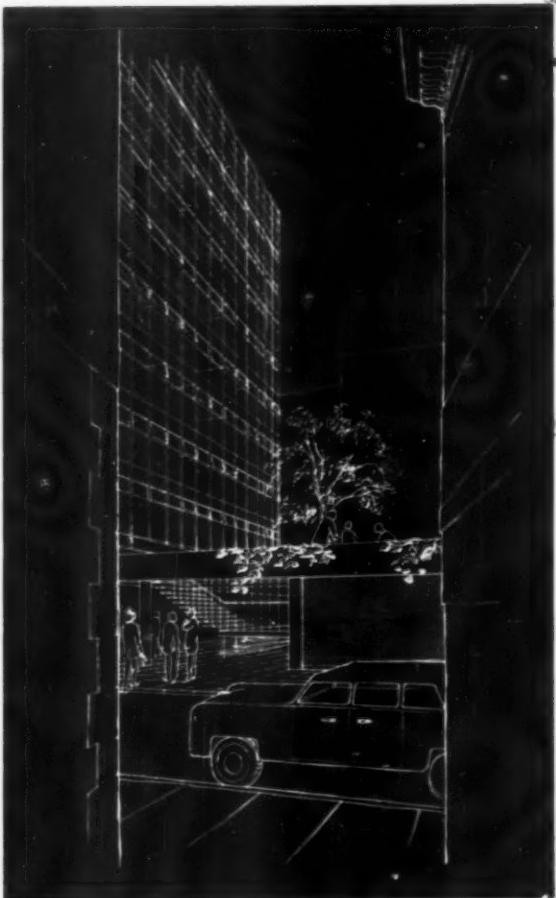
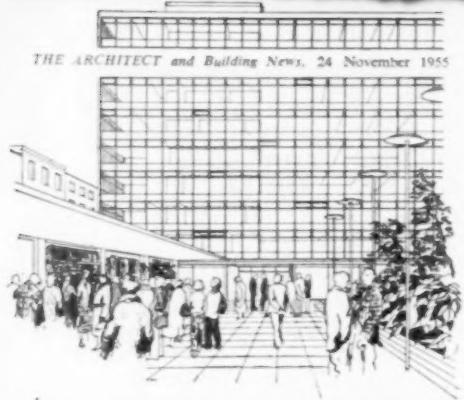
Local Taxation

In all of the areas visited there is a system of rating on capital values, new valuation lists being produced at short intervals.

In some areas rating is on site value only; in others on site value and improvements, often with a differential rate on the two elements.

The system of rating on capital values appears to work well. It is dealing with a form of value which corresponds with actual transactions, and there is far less artificiality than is involved in assessments for annual value in this country.

The system of rating site values only has, however, its objections. It serves well enough in a new community and has the great advantage of cheapness in administration. But



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branch area can call on the accumulated knowledge of the Century House staff, which includes a fully qualified architect who has made a special study of lighting in its relation to architecture and colour.

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The Profession in Africa

It happens that a building which is in some degree obsolescent may be unable to bear its rate burden whilst it still has a considerable useful life, and has therefore to be demolished to make room for another. This leads to high rates of depreciation (which have to be paid for by tenants) and to the swift removal of those older buildings which add so much grace to mature cities.

The system also bears very hardly on house owners in areas which are becoming developed for flats. Sites for such purposes fetch high prices, rating on the basis of which can be a serious burden to the owner of a similar site occupied by one house.

Rating on site values on expensive sites also leads naturally to building to the maximum possible height, and it seemed to me that many central buildings were carried to a height which was out of scale with their streets and surroundings. Such intensive development in central areas also aggravates car parking and traffic problems.

Housing Management

It is not I think, sufficiently appreciated in Britain how much energy, money and material are being devoted to providing improved housing for Africans.

During the period of industrial expansion of many towns, there was no private investment in housing for them except where such accommodation was provided in connection with their employment at a private residence.

Africans therefore built themselves deplorable shacks in areas which were subject to no bye-law control and lacked any public services. With the great increase in industrialisation, the numbers of these dwellings increased greatly.

These Africans have suffered morally by living in such conditions. They have lost many of their African virtues and have not acquired European ones.

An immense amount is being done to provide housing to new standards, and I would like to pay tribute to the imagination and enthusiasm which is being shown, and the advanced ideas which are being put into practice by municipalities and industries.

The rehabilitation of the de-tribalised African slum dweller (often a single man with no woman to help him to regain his self-respect) is bound to be a slow process. It is not, in essentials, very different from the problem which has faced housing managers in this country: and I feel that an experiment might well be made in the employment of professionally qualified housing managers with a sociological training, in the resettlement of Africans in their new homes. Such professional people might well be particularly useful in the management of African single men's hostels which are sometimes of great size and are occupied by men who come to the city for a year or so before returning to their villages for a period.

Housing managers would, of course, find some unfamiliar problems. It is, for instance, the practice in some areas for the African man to live in his hut with—in the interests of peace—his wives in a ring around it. The adaptation of such a ménage to the African equivalent of a local authority bungalow may not be easy.

Professional Education

In the United Kingdom education for the practical professions such as surveying is largely carried out in professional offices supplemented by correspondence or attendance at technical colleges when these are available.

In the Union, on the other hand, the tendency has been to

train an increasing proportion of land and quantity surveyors in universities which provide courses of four or five years' duration leading to a degree or diploma.

These courses vary in different universities but all are broad in scope. Land surveying, for instance, may include town planning, economics and engineering, land law and valuation, whilst quantity surveying may include geology, architectural drawing, commercial practice and advanced theory and design of structures. In addition, research may be either required or encouraged.

The difficulty with such courses in practical professions must be to ensure that the student obtains sufficient practical experience whilst at the university to make him a useful member of the profession as soon as possible after graduation.

In the case of quantity surveying courses, this difficulty is met by requiring the student to attend at a professional office. The course is then arranged so that, in each year, an increasing amount of time is spent on practical work in that office. A weakness in this system would seem to me to be that the student has inevitably during his long period a divided loyalty.

There is no doubt that the profession enjoys in the Union a high level of professional status and attainment. This may well be influenced by the facts that a considerable proportion of the profession consists of university graduates, who should include the better brains in the community, and that the universities themselves have set high standards.

Training of Africans in surveying is now starting. In Entebbe and Nairobi the survey departments have set up their own schools and are training Africans possessing the General Certificate of Education to carry out such technical tasks as suit their ability. Certain students are already studying for the Institution's examinations, and the best will be sent to the United Kingdom for further training.

Makerere College in Kampala (which is affiliated to London University) is hoping to produce graduates in estate management and the Royal Technical College in Nairobi (new, and superbly equipped) proposes at once to run courses in land surveying and quantity surveying with a view to their students taking our First and Intermediate Examinations if—after we have seen their courses—we can accept the College as a suitable place of training.

I saw some African land surveyors at work in Uganda and was favourably impressed. I hope that the great efforts being put into the two colleges mentioned will be equally successful.

If—as seems possible—a greater number of overseas students take our examinations, we shall have to take steps to ensure, by setting alternative questions or other means, that questions are capable of being answered by candidates. It is, for instance, a little difficult for a candidate from East Africa to answer a question involving a description of an oak tree a thing he can never have seen.

Statutory Registration of the Profession

Land surveyors and quantity surveyors are statutorily controlled in almost all of the areas visited, and the system seems to work satisfactorily. There is, however, an inevitable tendency for such machinery to be used to maintain a "closed shop" which was not its original intention. Moreover, in one area the great disadvantage of a statutory scale of charges, which proved with the passage of time to be too low, was forcibly impressed upon me, as in that area it is threatening to extinguish that section of the profession altogether.

It is of interest to note that in the Union a proposal which had been actively considered for ten years to register estate agents has been abandoned by the estate agents themselves because investigation led them to the conclusion that it would be restrictive and unlikely to achieve its main objects.

MOSAICS

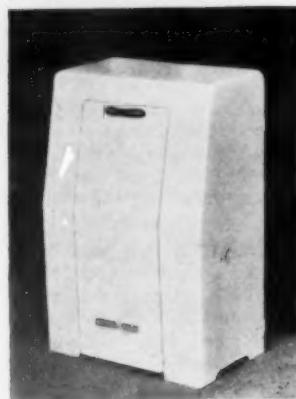
SERVICES LIGHTING FITTINGS B1/92

The "Revolutionary" infini-angle lighting unit has been produced by British Central Electrical Co. Ltd. of 6 & 8 Rosebery Avenue, London, E.C.I. It is designed specifically for workshop, inspection department and laboratory and is assembled with slip ring connections at all joints, thus allowing each joint to rotate completely. It can be positioned anywhere within a sphere, whose radius is determined simply by the number of arms used and the length to which they are extended. The fitting can be sited on bench top or wall or mounted on 7½" E.T. tapcon conduct base clamp base or direct on board bracket. Wiring between slip ring connections is internal and permanent; slip rings are tested up to 2,000 watts at 230 volts and are suitable for L.V. supplies. Perspex covers are fitted to protect the lamp.



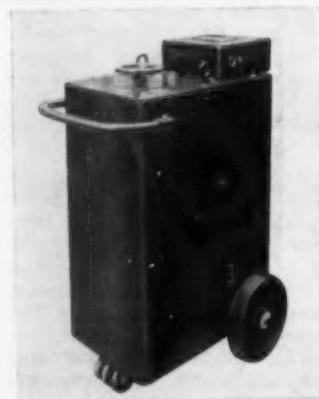
SERVICES WATER HEATING B6/38

The "Popular" automatic domestic gas fired boiler has completely enclosed controls which are readily accessible for maintenance purposes. A positive action precision thermostat is provided and the boiler is entirely water backed top and bottom. Return connections can be fitted one inch from floor level. Other features include a thermo electric flame failure automatic cut-off and an integral down draught diverter. The "Popular," manufactured by Frederick Kay (Engineering) Ltd. of Nashleigh Works, Chesham, Bucks, is Watson House approved. Model P.45 gives a guaranteed heating rating of 45,000 B.Th.U. Size: 32in high x 22in wide x 14in deep. Finish: Cream enamel.



PLANT WELDING E4/6

Two new arc-welding transformers suitable for medium and heavy fabrication work have been introduced by Philips Electrical Ltd. of Century House, Shaftesbury Avenue, London, W.C.2. Welding current is selected by positive action, heavy-duty rotary switch in conjunction with high and low-range output terminals; outputs are adjusted by hand wheel and read from a circular scale. The low current range of both plants is adjustable in 1 amp. steps and high range in steps of 10, 15 and 10, 20 A. respectively for models ES 1485 and ES 1486 (illustration). Open circuit voltages of both machines are sufficient for all present day electrodes and for Philips stud welding process. Rating details (ES 1485 first): max. intermittent welding 300 A. & 400 A., max. continuous welding 250 A. and 350 A., max. current 25 A. and 32 A., O.C. voltage: low 95 V and high 75 V, low range current 25-55 A. and 32-75 A., high range current 50-300 A. and 70-400 A., max. KVA rating 11.3 and 16. Components are totally enclosed and oil immersed in an M.S. tank. In accordance with B.S.538.



PLANT SITE BUILDINGS E2/19

The "Overseer" range of mobile site offices now being offered by George Cohen Sons & Co. Ltd., of Broadway Chambers, London, W.6, has been designed for use as site offices, dormitories, canteens or kitchen units. Two sizes are available, having lengths of 12 and 16 feet respectively and both having a width of 7ft 6in. The body is coach built with timber frame, covered with shiplap weather boarding. Floor is on timber runners bolted to chassis cross-members; tongued and grooved flooring is screwed to these bearers. Roof is curved and built up on beams secured to wall sections with angle iron, covered with tongued and grooved boarding and heavy duty Ruberoid felt. Steel framed casements are provided. Interior lining to eaves and underside of roof is of glazed hardboard. Fibre glass interlining between lining and exterior cladding may be inserted.



INDUSTRIAL NOTES

- The Minister of Housing and Local Government has appointed Dr. J. S. Carter, O.B.E., M.Sc., F.R.I.C., as Chief Inspector of Alkali, etc., Works, in succession to Mr. W. A. Damon, C.B.E., B.Sc., F.R.I.C., M.I.Chem.E., who is retiring on 4th December, 1955, from his position as Chief Inspector. Mr. Damon will continue with the Ministry in an advisory capacity.

- The Advisory Committee on Sand and Gravel, in a Report published on 16th November, point out that a large proportion of the sand and gravel production in the gravel regions of Wales and the South West of England, comes from sources which made no demands on agricultural land. They have mainly confined their report, therefore, to a general survey of the geology, sources of production, past and present outputs, and probable future demand, with the addition, where possible, of an assessment of the extent of reserves and any special problems relating thereto.

- Enfield Cables Limited announce that they have been chosen to supply the electric cables to be used by the Commonwealth Trans-Antarctic Expedition.

- During the last 15 months about one million square feet of Troldek were manufactured and supplied in this country by the British licensees, Messrs. H. Newsum Sons & Co. Ltd., of Lincoln and Gainsborough. Troldek will now be manufactured also in Canada and the United States

- Work has begun on a new depot for Jaeger System Concrete Ltd. at Hardgate Road, Shieldhall, for the production of ready-mixed concrete.

- It is announced by the Thermovent Heating Division of E. K. Cole Ltd. that Mr. G. W. Graham has taken up the appointment of Technical Sales Representative for Scotland. He is operating from the Company's Glasgow Depot at 17, Cadogan Street. Phone: Glasgow Central 3633/4.

- A "Rayburn Week" at the Berkley Street, Birmingham, showrooms of Rowe Bros. & Co., Ltd., included a special evening demonstration of new Allied Ironfounders' appliances and showings of the films "The Stockton Test," "There's a Job to be Done" and "Hip, Hip Hoo-Rayburn" for some 150 trade and professional guests who were welcomed by Mr. Gordon Rowe and Mr. W. R. Boot, assistant general manager.

- The new terra-cotta brickworks at Blantyremerfe, Uddington, built by the National Coal Board at a cost of £100,000 was officially inaugurated on November 1st when Mr. R. A. Moore, Deputy Production Director of the National Coal Board, Scottish Division, performed the ceremony.

- Claygate Fireplaces Ltd. have appointed Mr. J. Duncan Ferguson, F.C.A., as chairman, following the recent death of the Marquis del Moral.

- Myton, Ltd., Hull, members since January this year of the Taylor Woodrow Group of building and civil engineering companies, London, have been awarded a contract valued at approximately £400,000 for the erection of a 10-storey office block at 9, Albert Embankment, London, for the Decca Record Co., Ltd. The architects are Messrs Grace and Farmer.

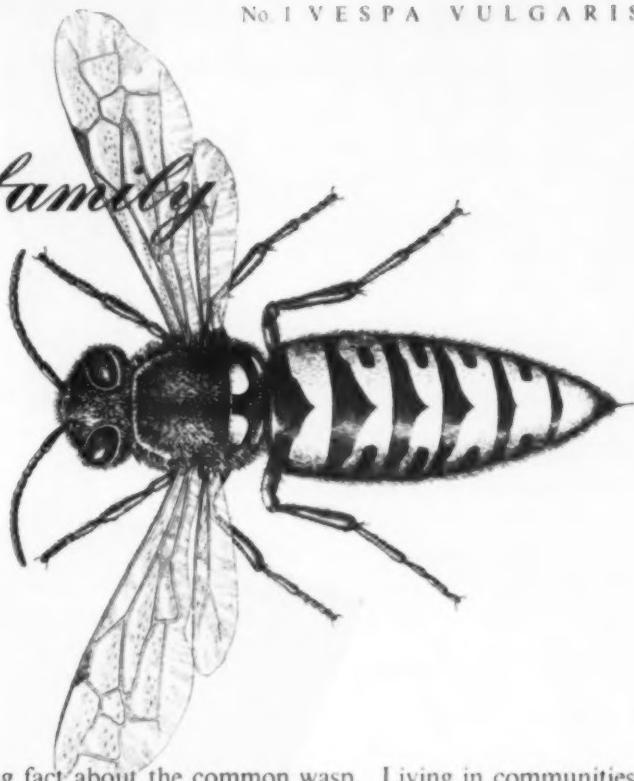
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a point

No. 1 VESPA VULGARIS



Here's an interesting fact about the common wasp. Living in communities it constructs its nest by roofing existing cavities with layers of a paper-like substance until it is completely covered with this highly protective lining.

What the wasp does by instinct "homo sapiens" learns by trial and error. However, SISALKRAFT will eliminate the trials and cut the margin of error too. For SISALKRAFT is almost untearable, pliable, clean and water-resisting—the ideal material for sarking, wall and floor lining, etc.

Then there is SISALATION (Reflective Insulation) which has all the virtues of SISALKRAFT, plus bright aluminium foil on one or both sides, for highly effective *thermal* insulation.



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CURRENT MARKET PRICES (LONDON)

(These prices apply to material purchased in the quantities named or otherwise as might be expected for a new building of moderate size).

November, 1955

AGGREGATES AND SAND

1½ inch—all in—ballast	23/-	Yard cube
inch do. do.	24/-	delivered
inch screened shingle	21/-	(in five yard
inch do. do.	22 9	loads or
inch granite chippings	45/-	more)
Sharp washed sand	23 2	
Pit sand	22 3	
Building sand	22/-	
Broken brick	18 6	
1½ inch shingle	22/-	
Cartage of muck	8/-	

BUILDING MATERIALS AS DESCRIBED, CENTRAL LONDON

CEMENTS packed in paper bags			Per ton
Portland in 6 ton lots			101/6
Do., from 1 ton to 5 tons 19 cwt do.			113/6
Do., Rapid hardening (6 ton lots)			112/-
Do. (but 1 ton to 5 ton 19 cwt)			124/-
Cement "Aquacrete" (do.)			146/-
Do., "417" or "Polar" (do.)			146/-
Do., "White" 1 ton (lots)			262/-

LIME—	132/- (1 ton loads)	deliv'd	
Hydrated including	129 6 (2/3 do.)	do.	
and paper	119 6 (4/5 do.)	do.	
Ground bags	117 6 (6 do.)	do.	

PLASTER—			
Keenes, coarse, pink (2 ton lots)	198 9 ton		
Do. do. white (do.)	204 3 do.		
Sirapite, do. (2 ton to 3 ton 19 cwt lots)	147 3 do.		
Do. finish (do.)	155 3 do.		
Hardwall, do. (do.)	158 9 do.		
Plaster, coarse, pink (do.)	145/- do.		
Do. do. white (do.)	153 3 do.		
½ in Plaster baseboard (25 to 75 yards)	3/- Yard Sup.		
½ in Do. (150 to 299 yards)	2 8 do.		
3½ in Jute scrim (100 yd. roll)	8/- each		
Cow hair (under 3 cwt)	97 6 cwt.		

FIRECLAY—			
Stourbridge, loose (1 ton lots)	168 9 ton	delivered	
Fire cement	12 3 14 lb.		

BRICKS

BACKING BRICKS (in truck loads)—			
Flettons	113/- per	1,000	delivered
Do. Keyed	115/-	do.	
Do. bullnose	133/-	do.	
Blue wirecuts	510 6	do.	
White	192/-	do.	
Southwater engineering (No. 1)	379/-	do.	
Firebricks—2½ inch	72 6 per	100	delivered
Do. —3 inch	89 6	do.	

STOCK BRICKS—			
Mild stocks	181 6 per	1,000	at Works
Second, do.	216/-	do.	
First, do.	237/-	do.	
Add for delivery—approx. 45/- per 1,000 in lorry loads.			

FACINGS (ex truck or lorry)—			
Rustics	138/- per	1,000	delivered
White	210/-	do.	
Blue pressed, 2½ in	562/-	do.	
Do. bullnose	576/-	do.	
Reds (Multi sand faced)	310/-	do.	
White glazed stretchers	1504/-	do.	
Do. headers	1480 6	do.	
Do. bullnose	1880/-	do.	
Do. double stretchers	1997 6	do.	
Do. double headers	1821 3	do.	
Breeze fixing bricks	29/- per 100		
Fire tiles and lumps	33/- foot cube		
Wall ties—8" x 1" x ½", black	63/- per cwt.		
Cement mortar (1 : 3) hand-made	92/- yard cube		

BRICKLAYERS' SUNDRIES—

AIR BRICKS	9 × 3in	9 × 6in	9 × 9in	12 × 9in
Iron	2 1	3 4	5 -	6 8
Galvanized do.	3 6	5 10	8 8	11 7
Terra Cotta	1 3	2 7	5 6	10 10
Chimney pots, Terra	1ft	2ft	3ft	4ft
Cotta (11 to 25)	7 3	12 8	28 9	49 9

PARTITIONS—

18in × 9in Blocks keyed for plastering.	2in	2½in	3in
Per yard super in 6 ton lots	3 9	4 4	5 3
In solid clinker including any half blocks	3 11	4 7	5 3
In cellular clinker blocks	4 4	4 7	5 4
In hollow clay blocks	4 4	4 7	5 4

Clinker blocks in small quantity	5 7	6 7	7 11
Intermediate quantities in all types may be had at intermediate prices.			
Smooth in lieu of keyed faces extra cost per side 3d. per yd. super			

SINKS—

Fireclay white glazed in and out—standard quality	24 × 18in	30 × 18in	30 × 20in
London pattern, no overflow,	72 6	90 9	96 -
6in deep			
Belfast, plain edge, 10in deep	84 3	143 9	192 9

FLUE LININGS, PLAIN, CIRCULAR—

	Foot linear		Each
	Straight		Bends
9in diameter	3 11		11 9
10in do.	4 11		14 9
12in do.	9 5		28 3
9in diameter, beaded end, 12in high			5 4

FLUE PIPES AND FITTINGS—

	4in	5in	6in
Heavy asbestos type, 6ft length	15 3	21 -	26 6
Do. 3ft. length	7 8	10 6	13 3
Do. bends	5 9	7 3	8 8
Light asbestos type, 6ft length	12 6	15 9	21 -
Do. 3ft length	6 3	7 11	10 6
Bends	4 7	5 9	6 11
Baffle	12 5	14 9	15 8

DRAINAGE GOODS

GLAZED STONEWARE STANDARD LIST	4in	6in	9in
ORDINARY TYPE—EACH			
Pipes in 2 feet lengths			
Junctions (4in on 4in, 6in on 6in, 9in on 9in)	1/8	2/6	4/6
Gullies with 4in outlets	2/6	3/9	10/1½
4in horizontal inlets	4/2	6/3	6/10½
4in vertical ditto	2/-	3/-	5/-
Black iron grids	9d	1 1/5	2 9/10

Adjustment to Current Cost	2 ton lots	Less than 2 ton lots
	or more	
"Best" pipes and fittings. Percentages to add	85%	117½%
Further percentages to be independently added in respect of:		
British Standard pipes, etc., 10. "Best" Tested pipes, 37½%.		
British Standard Tested, 47½%.		

IRON DRAINAGE GOODS—

	4in	6in
Cast iron pipes, 9 feet long	71 3	105 -
Do. 6 feet do.	51 2	79 10
Do. 4 feet do.	39 8	62 -
Do. 2 feet do.	24 3	36 10
Short bend	17 -	44 4
Junction	29 7	61 10

CURRENT MARKET

PRICES (Continued)

DRAINAGE GOODS—Continued

GULLEY PARTS—	4in	6in	
Traps, high level, invert	29/7	80/1	each
Inlet, bellmouth pattern	15/8	31/2	do.
Do. with one vertical branch	27/2	50/9	do.
Do. with two do.	73/8	107/2	do.
Extra for Sealed cover	9/6	12/3	do.

RAINWATER SHOES	4in	6in	
With vertical inlet and rebated top	39/3	78/2	each
Extension piece, 6in high	20/5	20/5	do.
Flat loose coated grating	4/-	4/-	do.
Loose solid coated cover	5/5	5/5	do.

MANHOLE CHANNELS, WHITE GLAZED—

Each	4in	6in	9in
Straight, 2 feet long	16/6	23/6	40/-
Taper, ditto	27/6	27/6	41/3
Bends, main, half section	31/9	45/6	74/6
Ditto, branch, ditto	19/3	27/6	—
Ditto, ditto, three quarters, ditto	27/6	42/9	—
Junctions, single	26/3	45/6	—
Ditto, double	35/9	62/-	—

BROWN GLAZED CHANNELS—

Based on standard list (less than 100 pieces)	4in	6in	9in
Half-round main channel (2ft long)	2/9	4/2	7/4
Extra for stop ends	2/9	4/2	7/4
Extra for outlets	5/5	8/2	—
Channel bends with splayed ends	8/2	12/3	—
Three-quarter section do.	10/10	16/4	—

MANHOLE COVERS—

	Black
24 x 18in Light foot traffic	29/6 each
Do. Strong do.	40/- do.
Do. Light car traffic	105/- do.
Do. Road traffic	160/- do.

SUNDRIES—

	Galvanized
Manhole steps	8/2
4in Mica valve fresh air inlets (L.C.C.)	28/- do.
Plumber's hemp	7/3 per lb.
Gasket, caulking	1/5/- do.
Canvas backed hair felt, 4in wide	9d. per ft. run

ROOFING MATERIALS

WELSH SLATES (delivered)—

	Quantity	Full Loads	100 to per 1,000	1 to per 100	per doz.
Sizes in inches		per 1,000	per 100	per 100	per doz.
22 x 11	1920/-	262/-	34/6		
20 x 10	1700/-	230/-	30/3		
18 x 10	1240/-	163/-	21/6		
16 x 10	1020/-	132/2	17/6		
14 x 9	780/-	90/9	12/-		
14 x 4½	347/-	40/3	5/3		

TILES (Broseley and Staffordshire)—	per 1,000	per 100
10½ x 6½ Machine made	280/-	39/-
Do., hand made, sand faced	350/-	46/9
Hips, valleys and angles	31/- per dozen	
Plain concrete tiles	Per 1,000	Per 100
	177/-	19/6

Sheeting asbestos corrugated, 6in pitch	7/6 yard super
4½ x 16 gauge, drive screws (galvanized) ..	17/- gross
7½ x ½ hook bolts and nuts (do.) ..	51/6 do.
Washers, round, flat galvanized ..	4/9 do.
Do. do. bituminous ..	2/- do.

ROOFING FELT—

Sanded bitumen felt (55lb)	1/- Yard Super
Ditto, but 75lb in weight	1/6 do.
Inodorous felt, best quality	3/- do.
Ditto, second quality	2/4 do.
Underlining	1/8 do.
Sheathing	1/8 do.
Galvanized felting nails	2/- lb.

PRECAST CONCRETE LINTOLS—

1 : 2 : 4 : 1in material, finished with fair exposed faces, including all form-work, and one 1in diameter mild steel rod reinforcement to each 4½in width.

Per foot lineal delivered to site

4½ x 6in	9in x 6in	9in x 9in	13½in x 9in	18in x 9in
4/-	6/-	7/8	9/6	11/6

STONE

PER FOOT CUBE in random blocks not exceeding 20ft cube in each, free on rail London.
Monks Park 8/- St. Aldhelm 9/-
Portland brown Whitbed 8/3½
Other stone but delivered to sites. Doultong 8/9, Beer 8/3

TIMBER

Softwood—sawn—random lengths.

	Per Standard	Per cubic foot
Carcassing quality	£105	12/8
Joinery quality	£120 and up	13/4
Plain edged unsorted flooring, per square	1in 90/-	1in 110/-
	1½in 138/-	1¾in 165/-

½in insulating wall board (250 yards) 4/- yard super.

Larger quantities cost less, and smaller quantities more.

SUNDRIES—

	Dia.	3in	6in	9in
Black hexagon	½in	7d	10d	1/-
bolts, nuts and washers. Each	½in	11d	1½	1/6
	1/3in	1/7	1/11	
Sashline, hemp, good quality	No. 6	No. 8	No. 10	
Per Yard Run	9d	1/1	1/4	
Floor brads		68/-	per cwt	
Cut Clasp Nails		71/-	per cwt	
Steel ordinary screws	1" No. 8 3/4	2" No. 8 5/2	per	
Brass, ditto	Do. 10/2	Do.	17/10	gross

HARDWOOD—

	Per ft	super	Per
Prime	½in	1in	ft cube
African mahogany	2/4	2/6	28/-
Honduras ditto	3/3	4/-	50/-
Portuguese Guinea ditto	3/1	3/3	36/-
African walnut	2/5	2/7	29/-
Australian ditto	5/6	5/10	65/-
English oak	4/3	4/6	50/-
Yugoslavian ditto	3/4	3/7	40/-
Burma and Siam Teak	5/-	5/9	65/-

DOORS.—STANDARD TYPE SOFTWOOD

Each in quantities 12 or more.
1½in finish, 4 horizontal panels moulded both sides 6ft 6in high.

2' 3" wide 41/-

2' 6" do. 42/3

2' 9" do. 44/6

FLUSH DOORS, 1½in thick, ply faced both sides, lipped edge.

All 6ft 6in high.

2' 3" wide 47/6

2' 6" do. 49/6

2in (ditto) all as above but in 3 panels.

2' 6" wide 55/9

2' 9" do. 58/3

2in (ditto) all as above but in 2 panels.

2' 6" wide 51/3

2' 9" do. 53/6

PANELLED DOORS :

see B.S. 459—Part 1.

FLUSH DOORS :

see B.S. 459—Part 2.

IRONMONGERY

	2in	3in	4in	5in	6in
Cast iron Butts, per pair	1/1	1/9	2/9	5/1	7/3
Hinges, spring, single action regulating, joggled, each	—	8/-	10/3	13/9	18/3
Do. but double action spring only, each	—	14/3	18/3	23/3	29/3
Do. blank only, each	—	8/9	12/-	17/9	21/6

- "TROFDEK SUPERSPAN" SPANS 40 FEET
- WEIGHS ONLY 3 LBS. PER SQUARE FOOT

TROFDEK

**Stand
no. 610**

SUPERSPAN prefabricated roof units are the latest development of TROFDEK Structural Systems, of which nearly one million square feet have been supplied during the last 15 months.

SUPERSPAN UNITS are designed for a minimum load of 25 lbs. per square foot, with deflection for 40 ft. spans limited to 1/500 of the span. Ultimate load is 5 times design load or **40 times the self weight of the unit**—an unequalled achievement in this field.

Architects, Engineers, Authorities in all parts of the country have reduced building costs of schools, hospitals, blocks of flats, offices, factories by specifying TROFDEK prefabricated roof construction. Now SUPERSPAN will multiply the benefits of long spans—low weight—quick fixing—low cost—no steel.

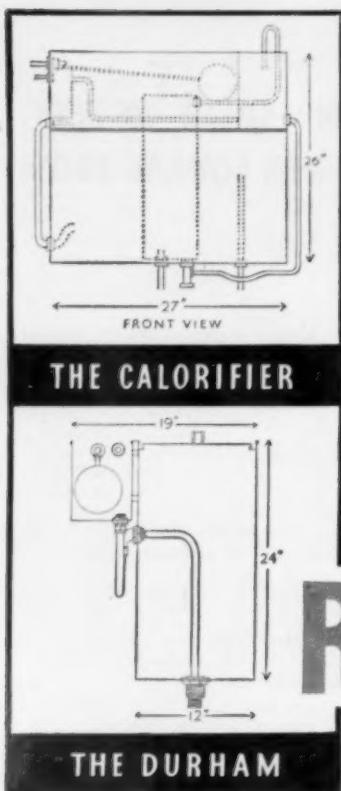
SUPERSPAN will be proudly shown for the first time at Olympia—and also, of course, the standard TROFDEK range (up to 24 ft. spans) with many interesting details.

On Stand No. 610 (Empire Hall Gallery) a cordial welcome awaits you.

H. NEWSUM SONS & CO. LTD.
LINCOLN & GAINSBOROUGH TEL. GAINSBOROUGH 2391



TROFDEK STRUCTURAL SYSTEMS WORLD PATENT



A BIG saving on installation costs

Rolyat tanks represent a saving all along the line, quite apart from the extra quality which is built into them. Special tanks are made for awkward situations at no extra cost, and an advisory service is at your command for any installation. They are specified by local authorities, Architects and Heating Engineers throughout the country.



Illustrated is the 25 gallon "Rolyat" recessed "Durham" tank. Please send me details of the range of "Rolyat" tanks.

NAME _____
ADDRESS _____

A/I

ROLYAT TANKS

THE ROLYAT TANK CO. LTD. CROMWELL RD. YORK



LARDER LIGHT... and Ventilation

Greenwood's Larder Lights simplify construction and are available in various sizes for instant and easy installation. They are made in heavy gauge steel and are supplied hot dipped galvanised. The ventilation panels are multi-louvred, weather-resisting and backed by insect-proof screens. For light and ventilation Greenwoods have the answer and will be pleased to supply full technical data on request.

OPENING LIGHT FRAME

The 'Permavent' Venti-Light opens only from the interior and is firmly secured when closed. Available in five standard sizes.

FIXED LIGHT FRAME

Made in two types: with louvred panels above and below glazing, and with louvres at top only. Available in six standard sizes.

★ VISIT STAND 192H, BUILDING EXHIBITION,
OLYMPIA, NOV. 16th—30th.



Greenwood-Airvac *ventilation*

GREENWOOD'S AND AIRVAC VENTILATING COMPANY LTD

Designers and Manufacturers of Ventilating Equipment for Buildings, Vehicles and Ships

BEACON HOUSE, KINGSWAY, LONDON, W.C.2. CHAncery 8135/6/7. "Airvac", London

CURRENT MARKET PRICES (Continued)

IRONMONGERY—Continued						
	12in	18in	24in	30in	36in	
Tee hinges (jappanned), per pair	2/-	3/10	—	—	—	
Do. but stronger, per pair	3/4	6/1	8/3	—	—	
Hook and Ride hinges, per pair	—	—	13/4	16/3	24/10	
BOLTS—each—	3in	4in	6in	8in	10in	12in
Cabinet, barrel, straight or necked	1/4	1/7	2/1	—	—	
Square spring, with brass knob	1/4	1/7	2/1	—	—	
Tower bolts	—	1/8	2/5	3/3	4/-	4/10
Barrel bolts	—	2/9	3/11	5/2	6/7	8/1
Add to Tower or Barrel bolts if necked	—	1d	1d	1d	1d	
LOCKS—each—						
Rim lock, 2 lever, wrot case brass bolt and bushing	Brass furniture	3 6				
Mortice lock, 2 lever, bushed	Brass furniture	8 9				
Cylinder latches, jappanned case	Brass furniture	15/3				
Brass sash fastener	each	4/-				
Casement fasteners (malleable)	do.	1 6				
Do. stays (do.)	do.	2/-				
Axle pulleys (brass face, iron wheel)	do.	4/7				
Do. as last, but with brass wheel, 1in.	do.	5/9				
Sash line, No. 8 Anchor yellow label	per yard	1/-				

METAL GOODS

British rolled steel joists ex mills to basis sections on site (6in × 3in, 8in × 5in or 6in, and 10in or 12in × 6in) ...	£34/0/0 per ton
<i>Extra cost over basis for following sections—</i>	
9in or 18in × 7in, 14in × 5½in, 15in × 5in, 14in or 15in or 16in or 18in × 6in, 20in × 6½in, 20in × 7½in, 10in or 12in or 14in or 18in × 8in ...	10/- per ton
5in × 4½in, 7in × 3in, 13 × 5in ...	15/- do.
12in × 5in, 22in × 7in ...	20/- do.
6in × 4½in, 7in or 8in or 9in × 4in, 10in × 5in ...	25/- do.
4in × 3in, 10in × 4½in ...	30/- do.
5in × 2½in, 5in × 3in ...	35/- do.
6in × 3in, 24in × 7½in ...	40/- do.
3in × 3in ...	50/- do.
4½in × 1½in ...	65/- do.
3in × 1½in, 4in × 1½in ...	70/- do.
½ mild steel reinforcing rods ex mill d/d	£35 0 0
<i>Extras per ton</i>	
½in and 1in diameter in size ...	32/- per ton
1in do. do. ...	32/- do.
1in do. do. ...	49/6 do.
½in do. do. ...	67/- do.
1in do. do. ...	87/- do.
1in do. do. ...	124/6 do.
<i>Extras for length</i>	
5ft to 3ft ...	7/6 do.
3ft to 2ft ...	15/- do.
2ft ...	22/6 do.
40ft to 45ft ...	15/- do.
45ft to 50ft ...	22/5 do.
Bolts and Nuts	90/- per cwt
Trench covering, including trays 1½in deep and rebated frames, 9in wide ...	20/6 foot run
Do., but 12in wide ...	22/- do.
Do., but 14in wide ...	24/- do.
Do., but 18in wide ...	31/6 do.

METAL SUNDRIES

Cast iron pavement light filled with 4in × 3in glass lenses ...	32/- per ft super
½in wrought iron plate door in four panels with stiles and rails on both sides ...	50/- do.
20 gauge galvanized iron trunking and straps ...	5/6 do.
24 gauge galvanized Talboy 6ft high 9in diameter with 9in × 12in base ...	57/6 each

CHAIN LINK FENCING—

In 25 yards lineal rolls inclusive of line wire, 2in mesh	Height in inches—
36	42
48	60
60	72
98/-	114/3
69/-	80/6
14½ do.	92/-
49/3	114/9
	137/9
	65/9
	82/-
	98/6

DOUBLE SOOT DOORS AND FRAMES—			
Fitted with brass turnbuckle and cast key	9in × 9in	12in × 9in	14in × 12in
...	19/-	28/-	48/6

SLIDING DOORS, GATES AND PARTITIONS—

Factory sliding doors in two leaves containing about 100 square feet with mild steel angle frames covered with 24 gauge corrugated galvanized sheeting and including hanging tubular track and gear complete ...	15/6 foot super
Factory entrance gates with mild steel frames clad with 2in mesh chain link complete ...	12/- do.
Steel partitioning, glazed (rough cast) and stove enamelled ...	18/6 do.

STEEL ROOF LIGHTS—

Lanterns with vertical sides, and hipped roof, glazed with 1in cast glass and lead flashed	14/- foot super
Skylights of similar construction (27ft super) ...	20/- do.

HIGH GRADE DOMESTIC BOILERS

Coke Fed. Performance 20 to 40 gallons raised from 40°F to 140°F per hour as under.

TYPE	£	s	d
20 gallons per hour 15in wide, 23in high	Plain	cast	iron black
	finish		9 0 0
Ditto, in cream mottle finish including side jackets ...	Ditto		13 0 0
25 gallons per hour 19in wide, 22in high	In cast iron as before and base plate		11 10 0
Ditto in cream mottle with side jackets and base ..	Ditto		16 17 0
40 gallons per hour 22in wide, 23in high	In cast iron, etc., as last ditto		18 5 0
Ditto in cream mottle all as last ditto	Ditto		24 13 0

GAS, WATER AND STEAM TUBES

(From Standard List)

Internal	jin &	jin	jin	jin	jin	jin	jin	2in
Diameter—	jin	jin	jin	jin	jin	jin	jin	
Tubes per ft	4d	4½d	5½d	6½d	9½d	1/1	1/4d	1/10
Bends each	8d	9d	11d	12	17½	2/7½	3/2	5/2
Elbows, sq. do.	10d	11d	11d	1/1	1/3	1/6	2/2	4/3
Do., round do.	11d	1/1	1/2	1/5	1/8	2/4	2/10	4/8
Tees ... do.	1/1	1/1	1/3	1/7	1/10	2/6	3/1	5/1
Crosses ... do.	2/2	2/4	2/9	3/3	4/1	5/6	6/7	10/6
Backnuts ... do.	2d	2d	3d	3½d	5d	6d	8d	1/1
Sockets ... do.	3d	3d	4d	5d	6d	8d	10½d	1/3
Sockets, dimin. ... do.	4d	5d	6d	7d	9d	1/1	1/4	2/-

PERCENTAGES ON OR OFF ABOVE

In quantity and in random lengths.

TUBE—	
Class A (light)	—12½%
Class B (medium)	+2½%
Class C (heavy)	+12%

FITTINGS—	
Lightweight	+20%
Heavy	+28%

RAINFOWER GOODS (Painted or Unpainted)					
In consignments of 5 cwts. and over.					
From Standard List.					
Pipe:	2in	3in	4in	5in	6in
6ft. lengths ...	each	12/10	14/5	18/11	24/8
3ft. do. ...	do.	7/—	7/9	10/—	13/1
Shoe, ordinary ...	do.	2/7	3/10	5/7	9/5
Bend ...	do.	3/1	4/4	6/3	11/3
Branch, single ...	do.	4/6	6/7	9/3	14/7
Offset, 4½in ...	do.	3/9	5/3	7/9	12/11
Do. 9in ...	do.	4/11	6/6	9/8	15/3
H.R. gutter, 6ft length	do.	6/—	8/5	10/4	13/10
Angle or nozzle ...	do.	2/6	3/1	3/9	5/4
Stop end ...	do.	9d	1/1	1/6	1/9
				Above plus	7½%



Showroom: Rediffusion (Yorkshire) Ltd., Hull. Accotile Specialist Contractors:—The Asbestos & Rubber Co. Ltd., Hull.

showroom for service using *Accotile*^{*} FLOORING

The success of a service depends upon its efficiency. And the first impact of efficiency is experienced at the point of reception. Goodwill is created immediately if the background impresses and pleases.

An essential element in this, as in all other decor, is the floor. It is for this reason that Accotile, the modern thermoplastic tile flooring, is chosen for showrooms and other areas where colourful distinction is considered of prime importance. Accotile has the advantage, among many others, of providing scope for individual colour schemes and designs, for it is laid tile by tile. It is

economical, permanent, easily maintained and in service immediately after laying.

Colourful literature is available on request.

FEATURES

Available in 22 colours, 12" x 12" and 9" x 9" tiles, $\frac{1}{8}$ " and 3/16" thick, with feature strip, coved skirting, and decorative multi-coloured hand or die-cut insets of numerals, animals, ornaments, etc. It can be laid on screeded con-

crete in contact with the ground.

Accotile is laid only by Armstrong Cork Co. Ltd., or approved Specialist Contractors from over 90 branches and Depots throughout the country.

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Armstrong ACCOTILE Flooring

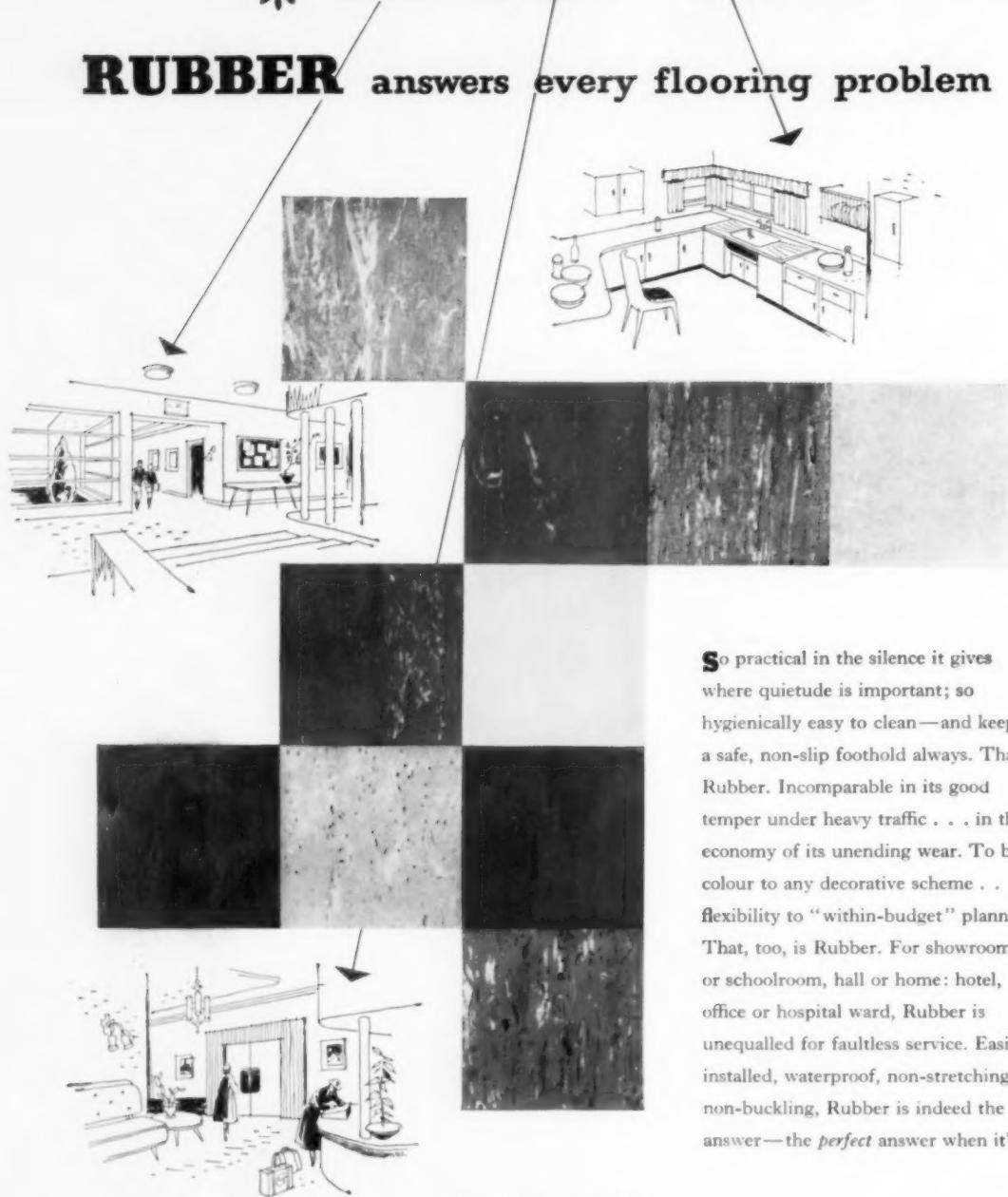
ARMSTRONG CORK COMPANY LTD., Flooring Department: Bush House, Aldwych, London, W.C.2.

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323

* **HERE . . . THERE . . . ANYWHERE**

RUBBER answers every flooring problem



So practical in the silence it gives where quietude is important; so hygienically easy to clean—and keep clean; a safe, non-slip foothold always. That's Rubber. Incomparable in its good temper under heavy traffic . . . in the economy of its unending wear. To bring colour to any decorative scheme . . . flexibility to "within-budget" planning. That, too, is Rubber. For showroom or schoolroom, hall or home: hotel, office or hospital ward, Rubber is unequalled for faultless service. Easily installed, waterproof, non-stretching and non-buckling, Rubber is indeed the answer—the *perfect* answer when it's

RUNNymeade **RUBBER FLOORING**

RUNNymeade RUBBER CO. LTD., 6 OLD BAILEY, LONDON, E.C.4

ELECTRIC HEATING

DOMESTIC HEATING

To many people, electricity for heating means an electric fire, used as a substitute for an open fire on chilly days before or after the main heating season or for occasional use, but in fact its uses and advantages go far beyond this: there are electric heaters for all heating requirements—the electric fire is only one of many. All electric heating appliances are silent, clean, and capable of the most accurate control, so as to provide exactly the right amount of heat of the right quality whenever and wherever it is required, without trouble or labour of any kind.

Radiation and Convection

Although there are many ways of warming a room, the heat is mainly distributed in two forms—radiation and convection.

Radiant heat does not impart any of its energy to the air: solid objects absorb or reflect it in varying degree according to their physical characteristics, and shade anything behind them from the heat. Convection heating, on the other hand, is warming by means of currents of hot air. The air warmed by the heating appliance rises, displacing the cooler air, thus setting up convection currents which transfer heat to the walls and ceiling of the room, and the objects within it. With convection heating the air temperature is always higher than the temperature of the surfaces in contact with the air, the reverse being the case with radiant heating. All domestic space heating appliances give off radiant and convected heat in varying proportions according to the type and design.

A heating element does not have to be red hot in order to emit radiant heat. As long as its temperature is above that of its surroundings it will radiate heat to them. A person sitting in a beam of radiant heat will feel comfortably warm even though the air temperature is relatively low.

As a convector operates by warming the air in a room, it must of necessity be placed near the floor where the air is coldest, whereas a radiant heater will operate at full efficiency at any level.

Radiant Fires

In all electric fires, the heat is produced by a resistance wire, usually of nickel-chromium alloy, which glows red hot. In the so-called 'firebar' type of fire, this wire is wound into a long spiral of about 3 1/2" diameter, laid in grooves formed in the surface of a moulded fireclay holder (Fig. 1), which is heated up by the resistance wire and emits radiant heat. This firebar also warms the casing of the heater and the air in contact with it, with the result that a considerable amount of heat is given off by convection in addition to the radiant heat from the front.

In the reflector type of fire, the resistance wire is closely wound on a tube or rod set in front of a polished metal reflector (Fig. 2), with the result that a high proportion of the heat generated is emitted in the form of radiation, an average figure being 70%, compared with about 50% radiation from the firebar type.

Reflector type fires reach their maximum heat output within two minutes of switching on, and are thus ideal when heat is required quickly, as in a bedroom for dressing or undressing. The firebar type, however, takes longer, but distributes its radiant heat more widely, and its convected heat warms the air: it is particularly suitable where comfortable conditions are required all over the room.

Radiant Panel Heaters

For situations such as a small dining room or bedroom where a radiant fire may be too hot for anyone sitting at the table, or might scorch the furniture, low temperature radiant panel heaters may be used. The surface temperature is not too high to cause discomfort if accidentally touched, while the heat output is adequate for local or background heating. In some types the heating element is fused into a

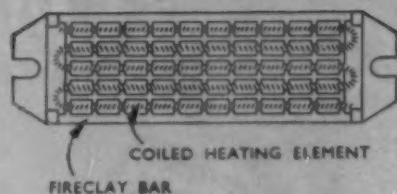


Fig. 1 Typical firebar

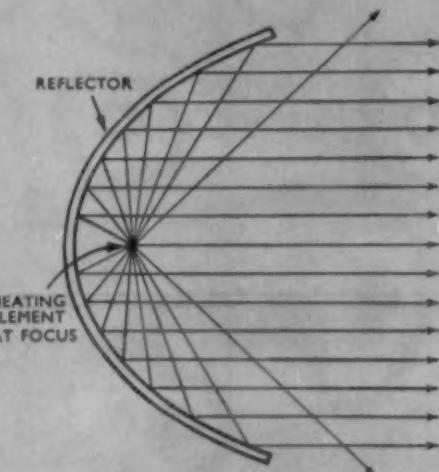


Fig. 2 Parabolic reflector

A parabolic reflector provides a concentrated beam of heat; other shapes of reflector distribute heat more widely.

TABLE 1 LOADING OF FIRES

Floor area of Room (8 ft. ceiling)	Loading of Fire	
	A	B
100 sq. ft.	1.5 kW.	1.5 kW.
140 " "	2.0 kW.	1.5 kW.
170 " "	2.25 kW.	1.75 kW.
210 " "	2.75 kW.	2.0 kW.
240 " "	3.0 kW.	2.25 kW.

Col. A: 11" cavity brick wall plastered, suspended floor, and plaster ceiling.

Col. B: More efficient construction giving average 'U' value of 0.20.

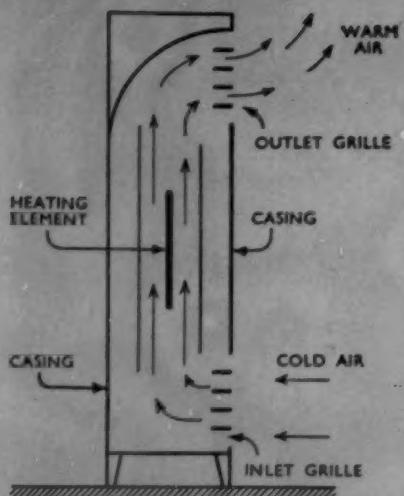


Fig. 3 Convector
showing principles of construction and operation

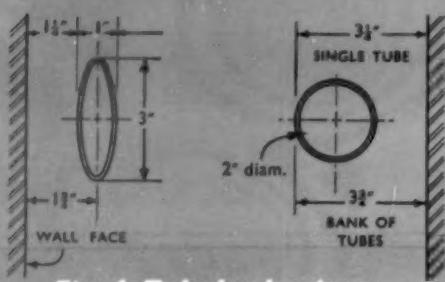


Fig. 4 Tubular heaters

TABLE 2 LOADING OF CONVECTORS

Capacity of Room in cu. ft.	Halls, Landings, Living rooms Loadings in kW			Bedrooms Loadings in kW		
	50/55°F. 60°F. 65°F.*	50/55°F. 60°F. 65°F.*	50/55°F. 60°F. 65°F.*	50/55°F. 60°F. 65°F.*	50/55°F. 60°F. 65°F.*	50/55°F. 60°F. 65°F.*
600	0.80	0.90	—	0.80	1.10	—
700	0.90	1.00	—	0.90	1.20	—
800	1.00	1.10	—	1.00	1.30	—
900	1.10	1.20	0.75	1.10	1.50	—
1000	1.20	1.30	0.90	1.20	1.60	—
1100	1.30	1.40	1.00	1.30	1.70	—
1200	1.45	1.60	1.00	1.45	1.90	—
1300	1.60	1.70	1.00	1.60	2.00	—
1400	1.70	1.80	1.20	1.70	2.20	—
1500	1.80	1.90	1.30	1.80	2.30	—
1600	1.90	2.00	1.40	1.90	2.40	—
1700	2.00	2.20	1.40	2.00	2.60	—
1800	2.20	2.30	1.50	2.20	2.80	—
1900	2.30	2.50	1.60	2.30	3.00	—
2000	2.40	2.60	1.70	2.40	3.20	—

For intermediate sizes take average of the two nearest sizes above and below.

For rooms with outside walls facing North or East, add 10 per cent.

The cubic capacity of halls must include staircase and top landing.

Column headed * is for living rooms where the heating is auxiliary to a coal fire in constant use. Where electric fires are used as well as heaters, the latter should be sized for 50/55°F.

This table is only applicable to buildings of sound construction with an average 'U' value of 0.4 or better.

sheet of toughened glass, which has an insulated back and is mounted for fixing to the wall: in others the panel is portable and gives off heat from both sides.

Another type of radiant panel operates at a much higher temperature, but on account of appearance and the need of mounting out of reach, is more suitable for industrial and commercial premises.

Convector

These appliances, as the name suggests, operate by convection, and are generally used for continuous heating with automatic control by thermostat. The construction consists of a metal or plastic case containing a heating element operating at black heat. Cool air is drawn in at floor level, warmed by the heater, and discharged through a grille at the top (Fig. 3). The thermostat, when fitted, is placed so as to respond to the temperature of the in-coming air.

Because the heating elements are out of reach and the casings never get uncomfortably hot, electric convectors are quite safe for use in nurseries. It should be emphasised however that clothes or towels must not be hung over them so as to restrict the air flow, for fear of scorching.

Convector are also made for mounting on the face of a wall or in a recess, the back of the convector being insulated to prevent unnecessary loss of heat. The electric convector, being somewhat similar to a hot water 'radiator' in its heating effect, should preferably be installed under a window to obtain a more even temperature than would be produced if it were on an inside wall: a different window should be opened for ventilation.

Combined Heaters

Electric heaters are also made which are designed to emit radiant and convected heat simultaneously, either by arranging for the front of the heating element to emit radiant heat while the back warms a stream of air which is discharged at the top of the case in the usual way, or by incorporating a radiant type fire in an otherwise normal convector casing with its own separate black-heat element. Both types are free-standing and portable.

Tubular Heaters

Made in lengths from 2 ft. to 17 ft. in multiples of a foot, tubular heaters are available in circular or oval cross section with holders for fixing to wall or floor (Fig. 4). The standard loading is 60 watts per foot run, which under ordinary conditions gives a surface temperature of about 180°F. Higher loadings can be obtained for use in special cases. As their thermal capacity is low, the tubes heat up rapidly—in 10 to 15 minutes.

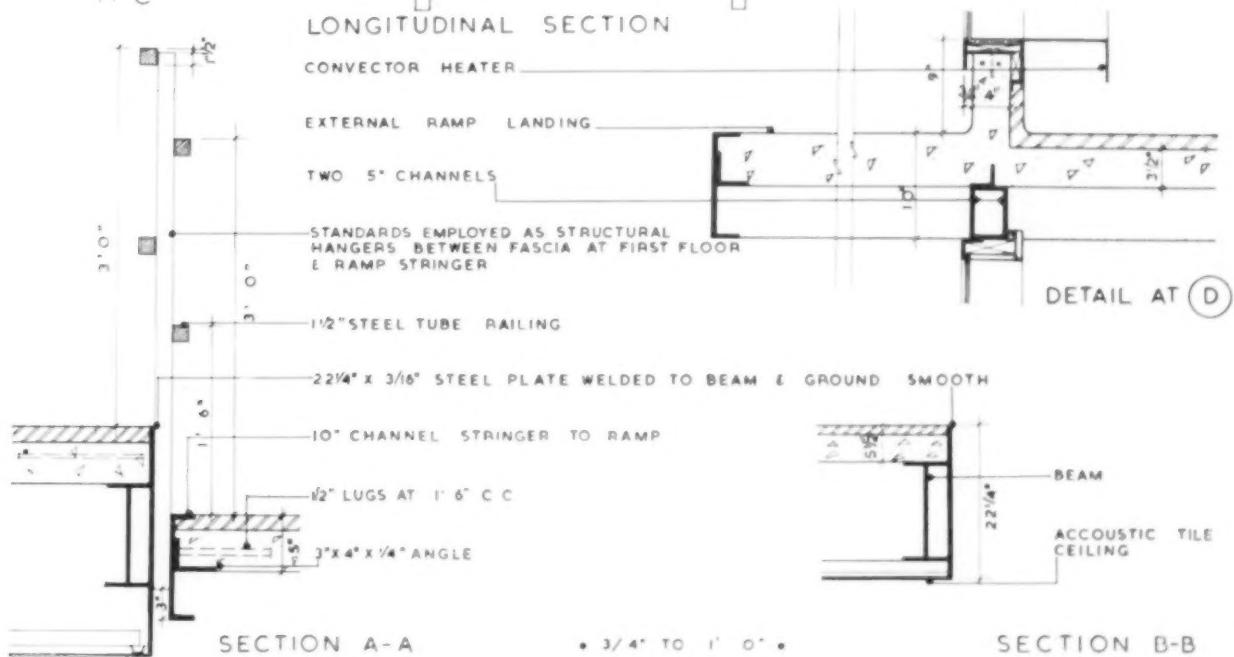
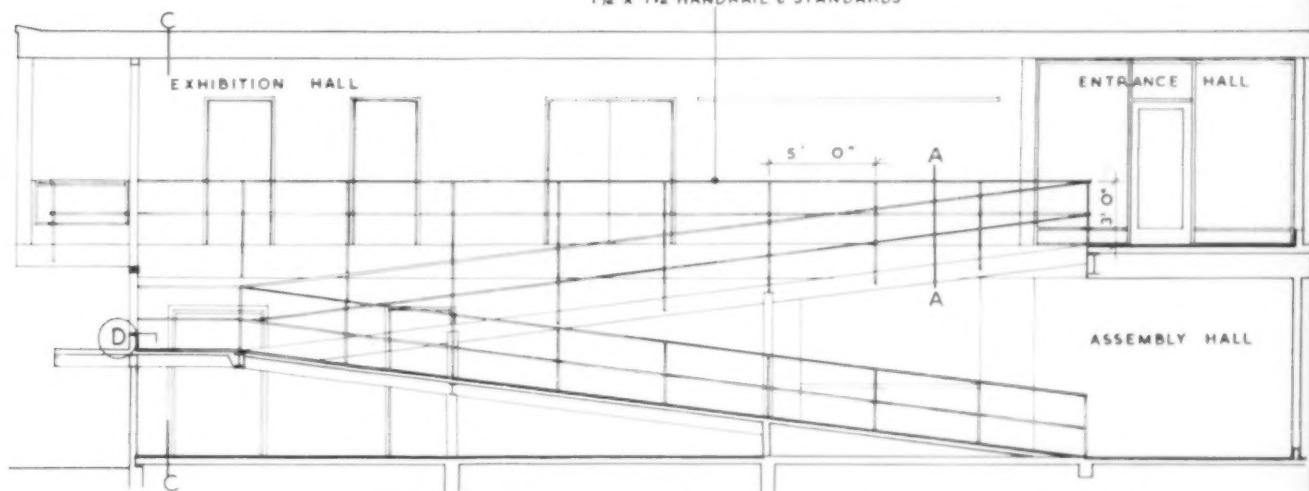
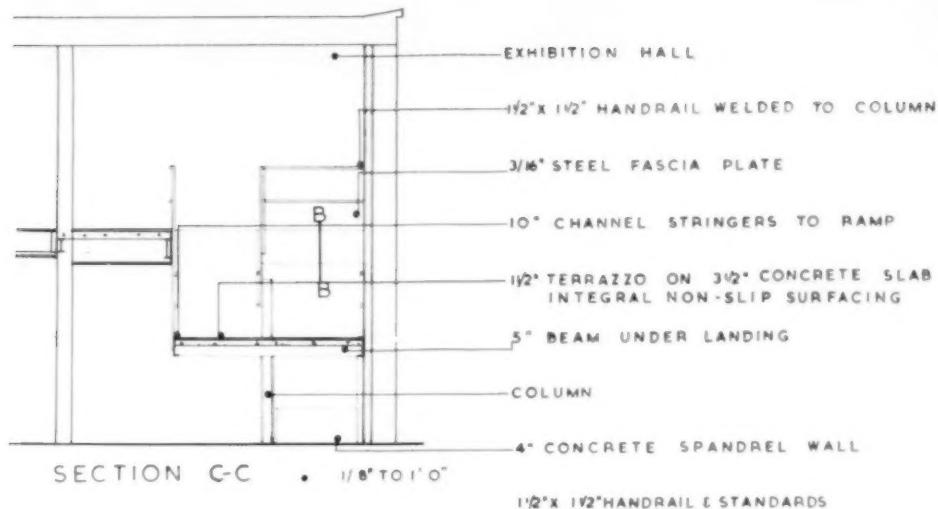
Tubular heaters provide the simplest and most flexible method of distributing gentle heat over a wide area and are particularly suitable for thermostatic control, but owing to the very considerable length needed to obtain the required amount of heat, they are not so suitable for heating living rooms. They can be used in banks, two or three or more tubes being placed one above the other as required. Cold down draughts of air from skylights and clerestory windows can be effectively checked by fixing tubular heaters high up below the glass line.

As with other low temperature heaters, the surface temperature is affected by the finish, and for this reason metallic paints (e.g. aluminium and bronze) and plated finishes should not be used.

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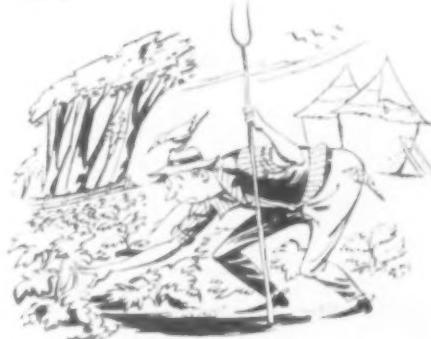
that the demand for ASBESTOLUX

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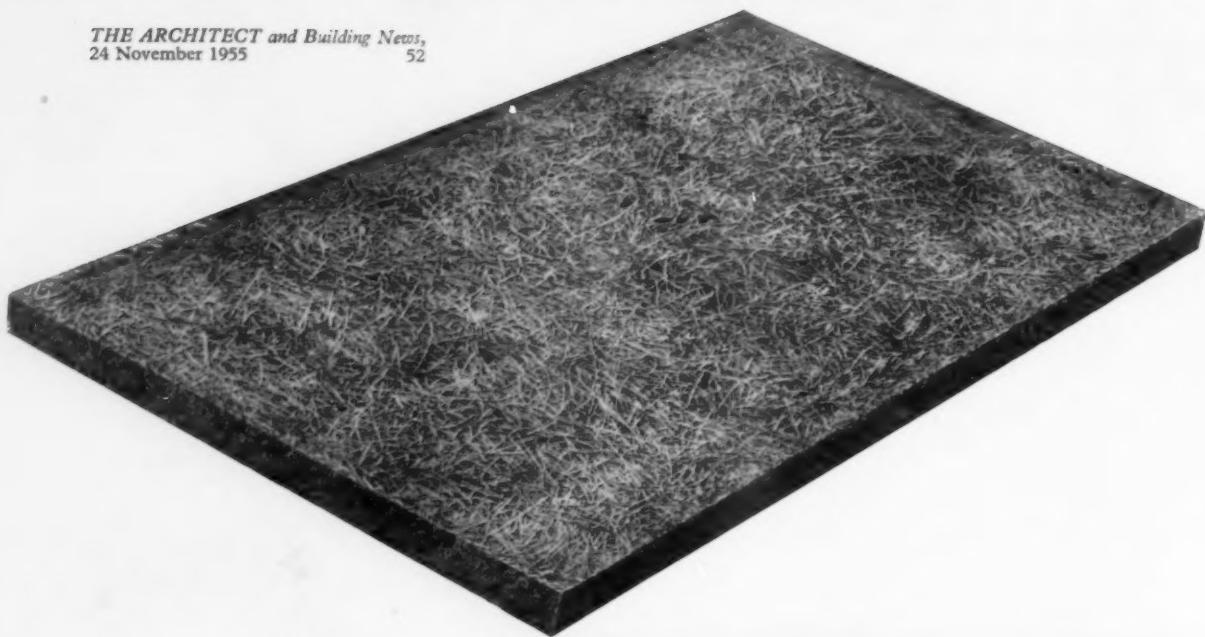
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AIREDALE AND WHARFEDALE JOINT CREMATORIUM COMMITTEE. (a) Construction of new crematorium, comprising chapel, crematorium, administrative offices and drives, at Rawdon, near Leeds. (b) Clerk of the Joint Committee, Town Hall, Ilkley. (c) 2gns. (d) November 28.

AUDENSHAW U.C. (a) Erection of a block of 6 permanent garages at Corporation Road Estate. (b) Council's Clerk, Ryecroft Hall, Audenshaw. (e) December 2.

BARROW-IN-FURNESS B.C. (a) Carrying out proposed alterations and extensions to the girls' grammar school. (b) Borough Engineer, Town Hall. (c) 2gns. (e) December 21.

BARROW-IN-FURNESS B.C. (a) Erection of 75 houses and 20 flats on the North Walney Estate. (b) Borough Engineer, Town Hall. (c) 2gns. (e) December 14.

BEXLEY B.C. (a) Erection of 12 pairs of houses, one block of four houses, 10 blocks of four maisonettes, two blocks of six and two maisonettes, at Halcot No. 3 estate. (b) Borough Engineer, West Lodge, Broadway, Bexleyheath. (c) 5gns. by cheque, payable to the Corporation. (e) December 16.

BIRMINGHAM C.C. (a) Erection of salt and grit stores, in structural steelwork and reinforced concrete, at the public works depots at Rose Road, Harborne, 17 and Kings Road, Tyseley, 11. (b) City Engineer, Civic Centre. (c) 2gns. (e) December 5.

CAERNARVON C.C. (a) Erection of a pair of houses at Cefn Hendre. (b) County Architect, County Offices. (c) 2gns., by cheque. (e) December 2.

CARDIGANSHIRE C.C. (a) Building work in connection with conversion of offices to water carriage system at (1) Llanddewi Brefi C.P. School, (2) Llanllithio C.P. School, (3) Silian V.P. School, (4) Beaulah C.P. School and (5) Cilcennin C.P. School. (b) County Architect, County Hall, Aberaeron. (e) December 12.

CHIGWELL U.C. (a) Conversion of Guy's Retreat, Buckhurst Hill, into 18 small self-contained flats. (b) Messrs. Tolley and Foster, Midland Bank Chambers, Buckhurst Hill, with the names of two architects for whom comparable schemes have been executed, if work has not already been carried out for the Council. (d) November 28.

CORNWALL C.C. (a) Erection of a new secondary school at Hayle. (b) Deputy Architect, County Hall, Truro. (c) 5gns. (d) November 30. (e) January 10.

DARLASTON U.C. (a) Erection of 12 communal garages at Rough Hay estate. (b) Council's Clerk, Town Hall. (c) 2gns. (d) November 26.

DURHAM C.C. (a) Erection of a new branch library at Blackhall Colliery, and new branch library at Murton Colliery. (b) County Architect, South Street. (d) November 30.

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EAST SUFFOLK C.C. (a) Erection of (1) detached block to include 3 classrooms, 3 laboratories, preparation rooms, changing rooms, showers, cloakrooms and staff room at Leiston Grammar School, (2) detached block to include 4 classrooms, an art room and cloakroom at Eye Modern School. (b) County Architect, County Hall, Ipswich. (d) December 5. (e) January 9.

ESSEX C.C. (a) Erection of extensions to (1) Mid-Essex Technical College, Chelmsford, and (2) Joseph Barrett Secondary School, Walthamstow. Approx. cost (1) £215,000 and (b) £27,000. (b) County Architect, County Hall, Chelmsford. (d) November 28.

ESSEX C.C. (a) Erection of schoolkeepers' houses at Ockendon Bonnygate and Ockendon Kennington Primary Schools. (b) County Architect, County Hall, Chelmsford. (d) November 26.

ESSEX C.C. AND THE TRUSTEES OF THE URSULINE CONVENT, BRENTWOOD. (a) Erection of a juniors' department of R.C. Primary School at Harold Hill, Romford. (b) Messrs. Scholes and Raymond, 79 Elvetham Road, Fleet. (d) December 1.

GREAT YARMOUTH B.C. (a) Erection of (1) 22 bungalows, 4 garages and a building sub-depot on land at the rear of Sturdee Avenue. (2) 4 garages at Keyes Close. (3) 8 bungalows, 6 houses and 7 garages on rear land west of Suffolk Road. (4) 10 bungalows at rear land east of Suffolk Road. (b) Borough Engineer, Town Hall. (c) 2gns. (e) December 9.

GRIMSBY CORPORATION. (a) Erection of public conveniences, baths and police box, together with ancillary works, in Humber Street. (b) Borough Engineer, Municipal Offices, Town Hall, Square. (c) £2. (e) December 5.

HAMBLEDON R.C. (a) Erection of one pair of houses at Cranleigh Village estate. (b) Council's Engineer, Council Offices, Bury Fields, Guildford. (c) 2gns. (e) December 14.

HAMPSHIRE C.C. (a) Erection of Alton Junior School. (b) County Architect, The Castle, Winchester. (d) December 2.

ISLE OF WIGHT R.C. (a) Erection of eight dwellings at Allotment Road, Niton. (b) 30 Pyle Street, Newport, of Messrs. E. L. Smith and Son, Melville Chambers, High Street, Sandown. (c) 2gns. (e) December 5.

KIDDERMINSTER R.C. (a) Erection of two pairs of houses and nine pairs of bungalows at Fairfield Estate, Wolverley. (b) Council's Engineer, Council Offices, Land Oak House. (c) 2gns. (e) December 19.

LANCASHIRE C.C. (a) Carrying out alterations to sanitary accommodation and drainage at Hoghton Stanley Grange, alterations to sanitary accommodation at Leigh Plank Lane Methodist School, erection of additional classroom at Crosby St. Thomas' C.E. School, foundations, drainage, entrance porch, and attendance in the erection of additional timber classrooms at Litherland Secondary Boys' School, and extensions and adaptations to form two additional classrooms, alterations to sanitary accommodation, timber extension to cloakroom at Golborne School. (b) County Architect, P.O. Box No. 26, County Hall, Preston, quoting ref. A/MG. (d) November 29.

LONDON—HORNSEY B.C. (a) Erection of (Block A) terrace of six houses with garages, (Block B) 17 houses with garages, (Block C) 8 maisonettes in four

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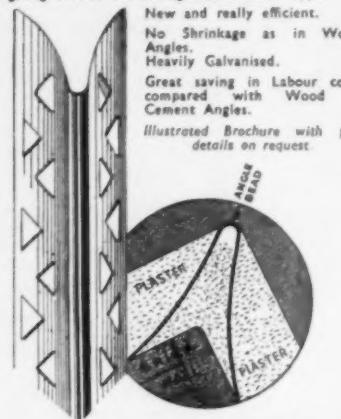
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storeys, and (Block D) 8 garages at Southwood Lane, N.6. (b) Borough Engineer, Town Hall, Hornsey, N.8. (d) November 29. (e) January 26.

MACCLESFIELD B.C. (a) Erection of 9 flats in Fence Avenue. (b) Borough Architect, 3 Jordangate. (c) 2gns. (e) December 12.

MANCHESTER C.C. (a) Erection of an aged persons' home in Hardy Lane. (b) City Architect, P.O. Box No. 488, Town Hall. (e) December 12.

MONTGOMERY C.C. (a) Erection of 6 houses, 5 sets of farm buildings, repairs and adaptations to two houses, repairs and adaptations to one set of farm buildings, and sub-division and adaptation of one set of farm buildings, at Bank Farm, Pool Quay, Welshpool. (b) Council's Clerk, County Offices, Welshpool. (c) 5gns. (e) December 14.

NEWCASTLE REGIONAL HOSPITAL BOARD. (a) Carrying out alterations and adaptations to a second operating theatre and rehabilitating the existing operating theatre suite at Whitehaven Hospital. (b) W. J. Ball, 72 Warwick Road, Carlisle, immediately.

NEWCASTLE REGIONAL HOSPITAL BOARD. (a) Erection of an admission hospital and 2 convalescent villas at St. George's Hospital, Morpeth. (b) Board's Secretary, Gate Hospital, Benfield Road. (d) December 3.

NEWCASTLE REGIONAL HOSPITAL BOARD. (a) Carrying out alterations to main ward block at City General Hospital, Carlisle. (b) Divisional Architect, 72 Warwick Road, Carlisle. (d) November 26.

NEWHAVEN U.C. (a) Erection of 30 dwellings comprising five blocks of flats at Western Road site. (b) Council's Engineer, Council Offices. (c) 2gns. (e) December 20.

NEW MALDEN. (a) Erection of proposed R.C. Secondary Modern School for 330 boys in Manor Drive North, New Malden. (b) Wilfrid C. Mangan, 2 Ribblesdale Place, Preston, Lancs.

NORFOLK EDUCATION COMMITTEE. (a) Erection of (1) Watton Secondary Modern School, with head teacher's house and caretaker's bungalow, (2) Fakenham Grammar School, three classrooms and (3) Branch library at North Walsham. (b) Chief Education Officer, County Education Offices, Stracey Road, Norwich. (d) November 30.

N. IRELAND — ANTRIM EDUCATION COMMITTEE. (a) Erection of proposed new primary school at Crocknamack Road, Portrush. (b) Crofton G. Dalzell, 6 Bath Street, Portrush. (c) 5gns. (e) December 9.

N. IRELAND — BELFAST C.C. (a) Carrying out alterations, etc., to first floor of Messrs. J. and T. M. Greaves' Ltd., Main Mill, First Street. (b) Education Architect, 40 Academy Street. (e) December 8.

N. IRELAND — DOWN EDUCATION COMMITTEE. (a) Alteration of, and extensions to "Killard," North Street, Newtonards, together with site works, for use as a residential special school. (b) Messrs. McCarthy and Lilburn, 2 Wellington Place, Belfast. (c) £5. (d) December 15.

N. IRELAND — TYRONE. (a) Erection and completion of a new primary school and school meals servery incorporated in main building at Garvevullion, for the Very Rev. J. P. Tinney, Drumquin, and the Tyrone Education Committee, Education Offices, Omagh. (b) P. J. Davidson, 16 High Street, Belfast, or Wm. J. Doherty and Co., 12 Castle Street, Derry. (c) 5gns. (e) December 7.

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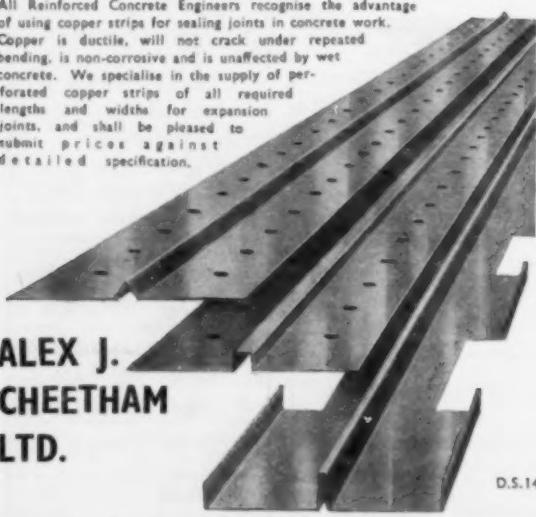
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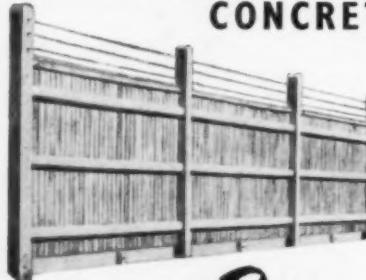
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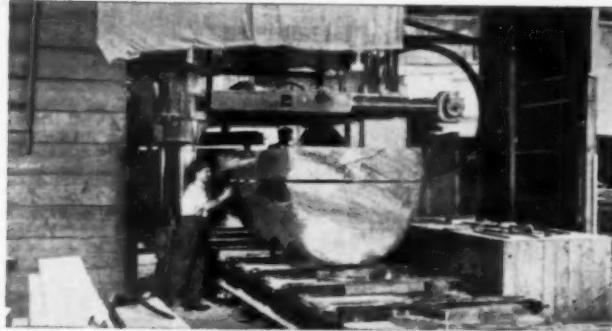
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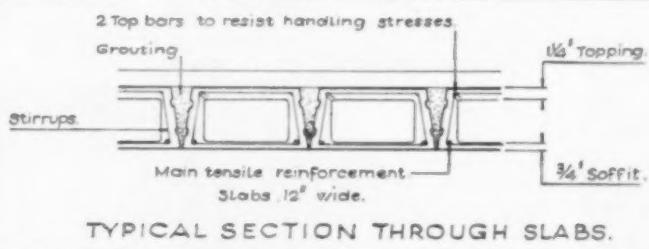
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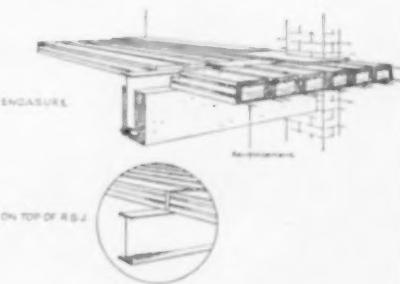


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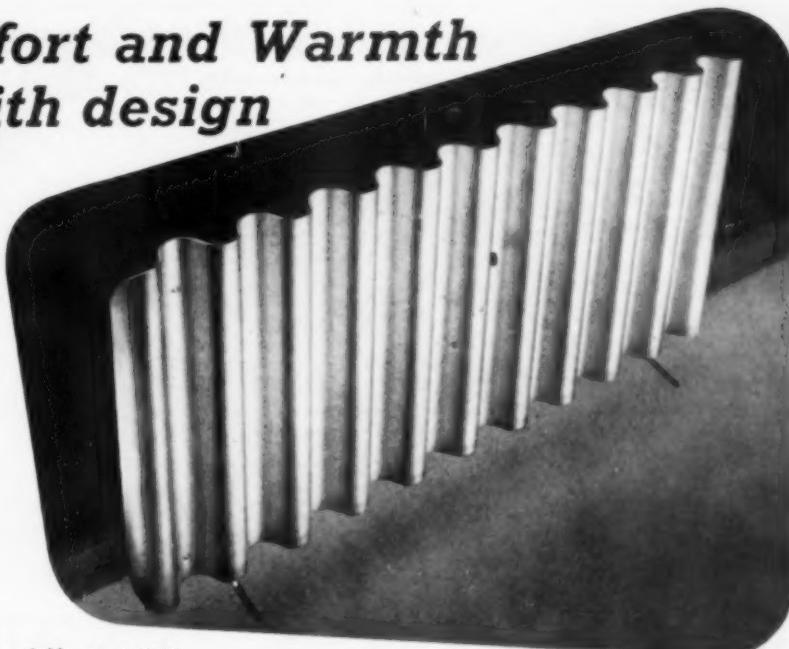


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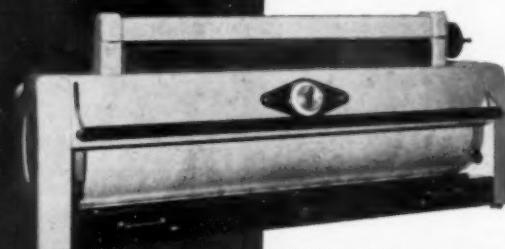
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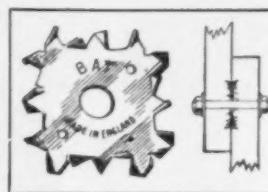
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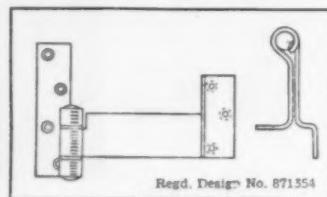
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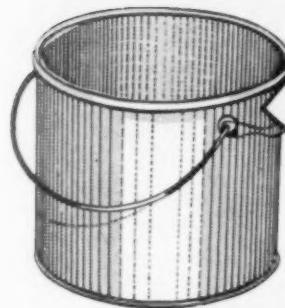
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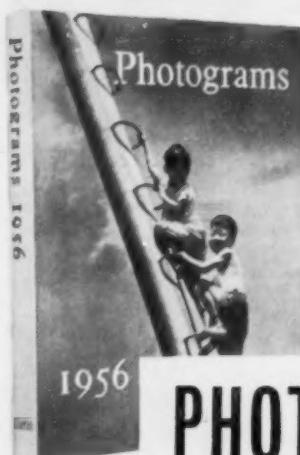
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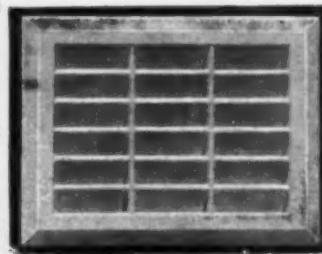
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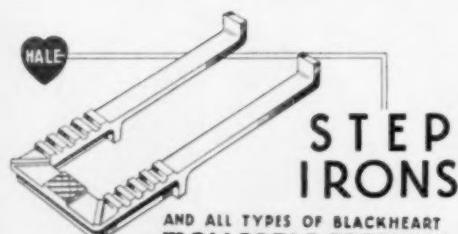
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LECTURER in TOWN PLANNING, to teach architectural and survey students and later post-graduates.

SENIOR LECTURER or LECTURER in ART, to teach design, etc., to architectural and other students and to develop small school of applied art.

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Salary scales (incl. temporary e.c.o.a.) - Senior Lecturers £1,531-£1,934 p.a.; Lecturers £1,162-£1,637 p.a.; Assistant Lecturers £937-£1,241 p.a. or slightly lower for transferred staff wishing to retain Col. Govt. pension rights. (Others could contribute to College pension scheme or maintain existing rights under e.g. F.S.S.U. or Ministry of Education, College paying employer's contributions.) Status and commencing salary dependent on experience and qualifications. Partly furnished houses or flats provided, rent according to salary. Free 1st cl. passages to and from Kenya on first appointment, leave and normal retirement for persons appointed and wives; up to equivalent of 1 adult passage for dependent children under 21. Leave on full salary at rate of 4 days for each month's resident service. Tours of service 24-36 months.

Further information may be obtained from the Secretary, Advisory Committee on Colonial Colleges, 1, Gordon Square, London, W.C.1, to whom applications (5 copies), giving details of education, quaifications and experience and naming 3 referees, should be sent by 10th December, 1955. [1774]

COUNTY BOROUGH OF EAST HAM

ARCHITECTURAL ASSISTANTS

Grade II £560-£640

London weighting is paid in addition. Salary in excess of the minimum may be paid according to qualifications and experience.

A subsistence allowance may be granted over a reasonable period to the persons appointed if unable to obtain suitable housing accommodation, necessitating the maintenance of two homes.

Further details and application forms returnable by 9th December, 1955, from the Town Clerk, Town Hall, East Ham, E.6. [1776]

STATES OF JERSEY

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VACANCIES exist in the Engineer's Department of the States of Jersey for two qualified architectural assistants on a temporary basis. Applicants must hold Associate Membership of the R.I.B.A., or equivalent qualification, and have had at least two years' general office experience. Salary £700, rising to £800.

Applications, giving full details of qualifications and experience, together with copies of two recent testimonials, should reach the Greffe of the States, States' Greffe, Jersey C.I. not later than 14th December, 1955. [1778]

APPOINTMENTS—contd.

CAMBRIDGESHIRE COUNTY COUNCIL

COUNTY ARCHITECT'S DEPARTMENT

APPICATIONS are invited for the following appointments:

- (a) One Quantity Surveyor, Grade VI £825/35/£1,000
- (b) Two Quantity Surveyors, Grade V £750/30/£900
- (c) Two Assistant Quantity Surveyors, Grade II £560/20/£640

For appointments (a) and (b) applicants should be thoroughly experienced in the preparation of estimates, Bills of Quantities, Specifications and settlement of final accounts, and should be Associate Members of the R.I.C.S., and for—

(c) Applicants should have had experience in Abstracting, Billing and site measurement. Preference will be given to applicants who have passed the intermediate stage of the R.I.C.S.

TWO ARCHITECTURAL ASSISTANTS

Grade III, £600/25/£725
Applicants should be registered Architects, and preference will be given to Members of the R.I.B.A. They should have experience in the design of public buildings, housing and modern schools, building construction, the preparation of specifications and site supervision.

The appointments are subject to the Local Government Superannuation Acts 1937 to 1953, the National Scheme of Conditions of Service, a satisfactory medical examination, and termination by one month's notice on either side.

Applications, stating age, present salary, present and previous appointments, details of training and experience, together with one recent testimonial and the names and addresses of two referees, should be submitted to the undersigned not later than Thursday, December 8, 1955.

CHARLES PHYTHIAN,
Clerk of the County Council.

Shire Hall,
Cambridge.
November 15, 1955.

[1772]

LONDON COUNTY COUNCIL

ARCHITECT'S DEPARTMENT

Architectural Assistants required (salary up to £783 according to qualifications and experience) and Architects GRADE III (up to £945) for modernisation, adaptations and minor improvements of schools, houses and other public buildings. —Particulars and application form, returnable by 13th December, from Architect, (AR/EK/AM/4), County Hall, S.E.1. (1923). [1782]

URBAN DISTRICT COUNCIL OF KIRBY-IN-ASHFIELD

ARCHITECTURAL ASSISTANT

APPICATIONS are invited for the permanent position of Architectural Assistant at a salary within either Grade I (£500 - £580) or Grade II (£560 - £640) of the National Salary Scales according to qualifications and experience.

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Housing accommodation will be provided, if required.

FRANK BOWMAR,
Clerk of the Council,

Public Offices,
Kirby-in-Ashfield.

[1766]

MINISTRY OF WORKS require ARCHITECTURAL ASSISTANTS for drawing offices in London, Edinburgh and various provincial offices, with at least 3 years' training, experience in an architect's office and of Inter. R.I.B.A. standard, London salary £461 to £725 p.a., elsewhere slightly less. Starting pay according to age and experience, prospects of promotion and permanency. State age, details of training and experience, to Chief Architect, Ministry of Works, 8, 27 (G), Abell House, John Islip Street, London, S.W.1. [1618]

APPOINTMENTS—contd.

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LEYTON COMMITTEE FOR EDUCATION (IN THE COUNTY OF ESSEX)

APPOINTMENT OF ARCHITECTURAL ASSISTANT

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Details and form of application from the Borough Education Officer, Kirkdale Road, Leytonstone, E.11, to whom they should be returned by THURSDAY, 15th DECEMBER, 1955.

D. J. OSBORNE,
Town Clerk.

Town Hall,
Leyton, E.10. [1781]

BOROUGH OF WATFORD

APPOINTMENT OF ASSISTANT ARCHITECTS

- (a) GRADE A.P.T. IV
- (b) GRADE A.P.T. III
- (c) GRADE A.P.T. II

APPICATIONS are invited for Assistant Architects within the above Grades, according to qualifications and experience. Applicants for (a) should be Registered Architects.

Forms on application, returnable by December 7.

Consideration will be given to the provision of housing accommodation if required.

F. C. SAGE, A.M.I.C.E.,
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Borough Engineer, Surveyor and Architect,
Town Hall, Watford. [1767]

LONDON COUNTY COUNCIL

ARCHITECT'S DEPARTMENT

VACANCIES for Architects Grade III (up to £945), and Architectural Assistants (up to £783), for widespread construction programme which includes houses, blocks of flats, schools of all types, and various public and industrial buildings. Application forms and particulars from Architect, (AR/EK/A/3), The County Hall, S.E.1. (1923). [1766]

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ARCHITECTURAL APPOINTMENTS VACANT

The engagement of persons answering these advertisements must be made through the local office of the Ministry of Labour and National Service, etc., if the applicant is a man aged 18-64 or a woman aged 18-59 inclusive, unless he or she or the employer is excepted from the provisions of The Notification of Vacancies Order, 1952.

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GOLLISS, McIvin, Ward & Partners, 15, Manchester Square, W.I., require Senior and Junior Staff, competent working drawings essential; opportunity to work on contemporary buildings.—Write or telephone WELbeck 9991. [1725]

SENIOR ASSISTANT ARCHITECT, contemporary designer, able to take responsibility, required for varied practice over very wide area—Details of experience and salary required, please, to J. D. & B. Y. TETLOW, A.R.I.B.A., M.I.M.T.P.I., Friary, Lichfield. [1745]

SENIOR ARCHITECTURAL ASSISTANT required in Carlisle office. Must be really experienced, of Final or Intermediate standard and able to take full responsibility.—Graham & Roy, Chartered Architects, 6, Pater-noster Row, Carlise. [1768]

Architectural ASSISTANT of R.I.B.A. Intermediate standard required in Architect's department of Estate Developers in the outer London South-Eastern area, engaged on private residential development, shops, etc. Salary in accordance with experience.—Write stating age, experience and salary required to Box 7760, c/o A. & B. N. [1770]

TWO JUNIOR ASSISTANTS required with about two years drawing office experience to work on modernisation programme. Travelling is entailed. Canteen facilities. Salary according to ability.—Apply by letter, giving full details, to Mac Fisheries Ltd., Architects' Department, Little Trinity Lane, E.C.4., reference MG.BT.D. [1771]

ERIC Lyons requires Junior Assistant.—Write giving brief details, to Mill House, Bridge Road, Hampton Court, Surrey. [1779]

Architectural ASSISTANT required in N.W. London area with minimum qualification of Intermediate R.I.B.A. Preference will be given to applicants having some experience in the design of industrial buildings and housing. Salary between £500 and £600 p.a., according to qualifications and experience.—Write Box AC 14071, Samson Clerks, 57-61, Mortimer Street, W.I. [1776]

ESTIMATOR and Quantity Surveyor required for Works Engineer's Department, able to assist in the preparation of estimates for general factory building works and preferably with a knowledge of factory services and plant installations.—Apply stating full details of age, experience and approximate salary expected to Reference EQS, Personnel Manager, Armstrong Siddeley Motors, Parkgate, Coventry. [1783]

SITUATIONS VACANT

The engagement of persons answering these advertisements must be made through the local office of the Ministry of Labour and National Service, etc., if the applicant is a man aged 18-64 or a woman aged 18-59 inclusive, unless he or she or the employer is excepted from the provisions of The Notification of Vacancies Order, 1952.

QUANTITY SURVEYOR (Qualified) required for estimating, taking-off and billing, and generally to look after contracts. Starting salary not less than £800 p.a. In the first instance this will be a temporary position for not less than two years.—Apply A. Guinness, Son & Co. (Dublin) Limited, St. James's Gate, Dublin, giving date and details of experience, and present salary. [1752]

STORE DEVELOPMENT. An unusual opportunity occurs for an Assistant to the Development Executive in planning, organising and equipping new buildings for an extensive programme. Applicants are invited to submit details of experience, education, age and availability. Salary range £1,000-£1,500, according to qualifications.—Box 7759, c/o A. & B. N. [1763]

SHOPFITTING. An opportunity occurs for a top-class setter out with wartime experience in a Planning Department to take charge of Planning Section of an extensive store development programme. Salary £1,000. Applicants should send details of age, experience and availability.—Box 7755, c/o A. & B. N. [1764]

DRAUGHTSMEN with architectural and/or shopfitting experience required to work in Welwyn Garden City on extensive store programme. Applicants should send full details of experience and availability. Salary £700-£1,050 according to qualifications.—Box 7756, c/o A. & B. N. [1765]

COMPETITION

CITY AND ROYAL BURGH OF PERTH ARCHITECTURAL COMPETITION

THE Town Council of Perth invite Architects practising in Scotland to submit designs in competition for the lay-out of buildings, roads, parking spaces, etc., and for shops, offices and houses in a central area of the Town.

The Assessor is MR. Robert J. Nasmyth, A.R.I.B.A., M.T.P.I., R.I.A.S., partner in the firm of Sir Frank Mears and Partners, Architects and Planning Consultants, Edinburgh.

The premiums are £450, £375 and £250. Conditions may be obtained from the Town Clerk, City Chambers, Perth, on payment of a deposit of £2 which will be returned either on the submission of a bona fide design or the return of the Conditions within four weeks of the last day for submitting designs, namely 30th April, 1956.

Applicants for conditions must state their registration number under the Architects' Registration Acts, or if as yet unregistered, the date of application for registration and the number of the receipt issued by the Architects' Registration Council in respect of the admission fee.

City Chambers, Perth. 18th November, 1955. [1784]

PUBLIC NOTICE

IN THE HIGH COURT OF JUSTICE

IN BANKRUPTCY. No. 659 of 1955. IN THE MATTER OF a bankruptcy petition filed the 20th day of October, 1955.

TO George Edward Bright a domiciled Englishman whose present place of business or residence may have been unknown to him. Architect and lately residing at 19 Drayton Avenue, S.W.1 and carrying on business at 11 Lower John Street, Regent Street, W.1, both in the County of London, but formerly residing at 28 Links Side, Enfield, in the County of Middlesex.

TAKE NOTICE, that a Bankruptcy Petition has been presented again you in this Court by National Provincial Bank Limited, having our registered office at 15 Bishopsgate in the City of London. Bankers and the Court has ordered that the publication of this notice in the London Gazette and in "The Architect and Building News" newspapers shall be deemed to be service of the Petition upon you; and further take notice that the said Petition will be heard at this Court on the 23rd day of December 1955 at 11 o'clock in the forenoon, on which day you are required to appear, and if you do not appear the Court may make a Recovery Order against you in your absence.

The Petition can be inspected by you on application at this Court.

Dated this 13th day of November, 1955.
THOMAS CUNLIFFE,
Registrar. [1785]

AUCTION

BUILDING ESTATE, MIDHURST. Approx. 13 acres. Planning consent held. Ripe immediate development. Zoned 4 and 6 to acre. Long frontage to two roads. All main services. Freehold. Auction December 8, 1955.—Powell & Partner Ltd., Forest Row (Tel.: 363), Sussex. [1773]

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WORK REQUIRED

GRADUATE Designer-Draughtsmen prepare Heating, Ventilating and Electrical schemes and specifications to requirements of Architects and Consultants.—Box 7629, c/o A. & B. N. [1741]

ACCOMMODATION

YOUNG C.Q.S., forced to vacate present offices in W.L. area by end of year, urgently requires about 400 square feet floor area in similar professional area. Would share accommodation with other firm.—Box 7626, c/o A. & B. N. [1738]

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HARDCORE Walling Stone and Pitching delivered or collected from quarries at Fish Hill, near Broadway, Worcestershire, and Hornsleasow, near Bourton-on-the-Hill, Glos.—Apply to Baillie, Brind & Co., Ltd., Prudential Chambers, Banbury, Oxon. [0008]

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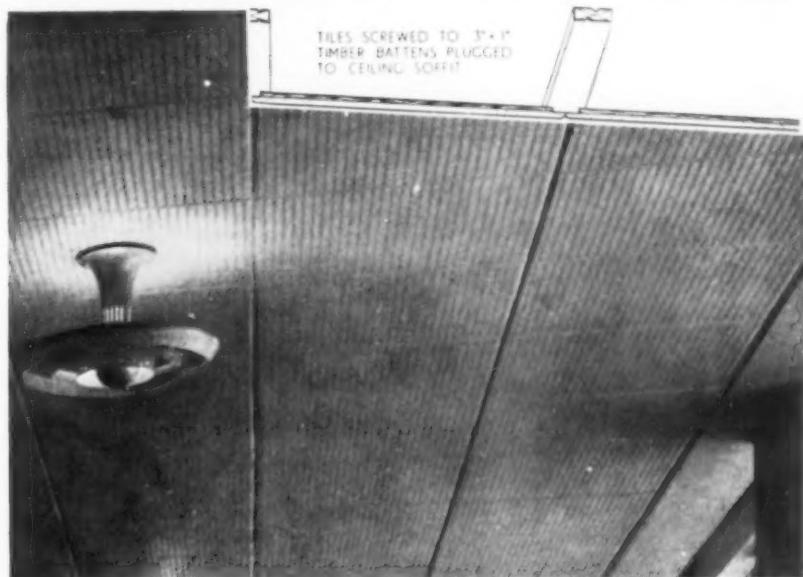
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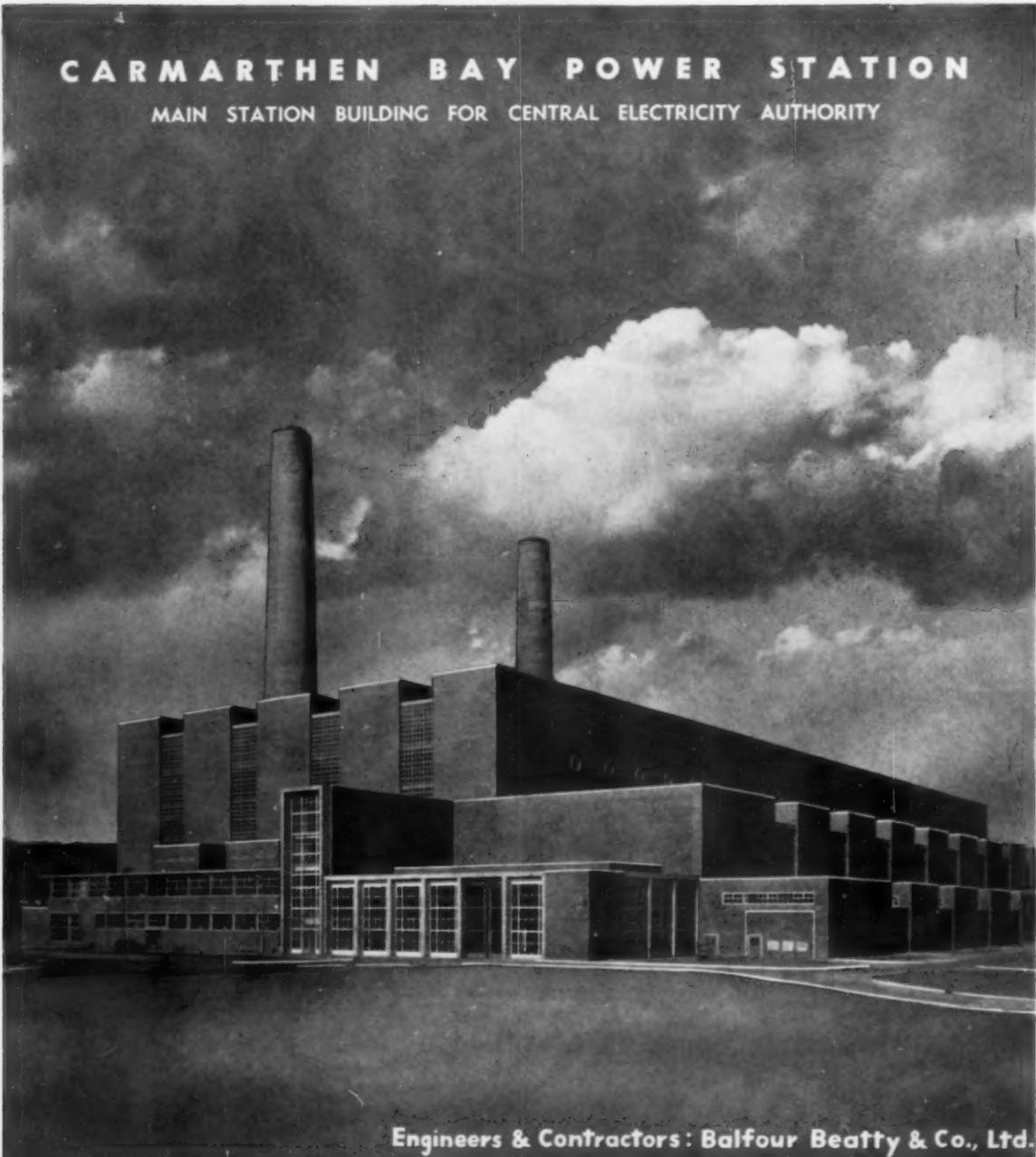
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